



> **PRIVA CONNEXT 908 & PRIVA OFFICE DIRECT 9**  
New Software Release

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## New Software Release Priva Connex 908 and Priva Office Direct 9

The annual software update of the Private Connex process computer is now available. This update mainly reflects recent technical developments and changing user needs. In addition to new functionalities, the update also includes important innovations in the areas of stability and security, which ensure that the software meets the changing demands of today's world. The 2017 software release for your Priva Connex contains a number of important, cutting edge innovations.

### Expanded Irrigation Functionality

One of the most essential elements in attaining a healthy, high-performing crop is irrigation. This is often seen as "something that is completely under control," but nothing could be further from the truth. The availability of water to the crop is a key factor in the complete moisture balance of the crop, so there is still much to be gained through irrigation. To make the most of the irrigation strategy, some changes and additions have been made.

The first change is that the program has been expanded to eight periods. This is especially useful for artificially lit crops: it allows you to more optimally adapt the irrigation strategy to changing lighting conditions. PAR sensors are also being used more and more in cultivation. To allow the PAR sensor to be used for irrigation, the option "irrigation on PAR sum" has been added to the irrigation strategy.

Because PAR sensors are increasingly being used for multiple controls, it is important that they are also reliable. Therefore, PAR sensors can now also be compared to the calculated indoor irradiation and/or other PAR sensors. When deviations are too high you will receive an alarm notification.

In addition to these options, the update also allows you to set your "own influences" on the radiation sum start and irrigation quantity in the valve group settings program. With the addition of these new features to the Connex process computer irrigation programs, you now have greater flexibility and options for achieving the best strategy for your crop.

### Ventilation Above the Curtain with Next Generation Greenhouse Cultivation

Ventilation above the curtain – a development based on the insights from "Next Generation Greenhouse Cultivation." Opening the vents above the curtain makes it possible to maintain a constant greenhouse climate while also saving energy. Ventilation above the curtain is therefore seen as an alternative to not closing the curtain all the way. A big difference between the two approaches is the temperature above the curtain.

When the curtain is not closed all the way, heat (i.e. energy) escapes to the ridge, where the temperature rises. This has the desirable effect of reducing the sudden temperature drop that would otherwise occur when the screen is opened. When air is vented above the closed curtain, the temperature above the curtain will remain relatively low (energy saving), but when the screen is opened an undesirable temperature drop will occur. The ideal situation is to vent above the curtain and minimize the gap during the night and then to partially open the curtain and ventilate as much as possible in the morning. This eliminates any sudden temperature drop and saves energy.

With the additional functionality for the correction conditions, the scenario we have sketched here is now possible. The curtain positions and functions are now available as conditions. This allows you to activate correction programs – for the vents for example – based on the measured curtain positions. This way you can adjust the air behavior during use of the curtain. Accordingly, you can make optimal use of the insights from "Next Generation Greenhouse Cultivation."

## **Drying Curtains with Next Generation Greenhouse Cultivation**

Energy curtain use has really taken off in recent years, and cultivation with double curtains is the latest development. Yet there is one aspect of “ventilation above the curtain” that requires special consideration: due to the moisture transport through the curtain, the curtain itself becomes damp. And when you open a damp energy curtain, folding and wringing of the curtain are an inevitable consequence. Ordinarily this results in water dripping onto the crop. To prevent this we have added the “curtain drying” function, a development based on the insights from “Next Generation Greenhouse Cultivation.”

With this functionality, you can easily enter a waiting position and a drying time for your energy curtain. When the energy curtain is opened it will go to the waiting position where it will remain for the drying time before it is completely opened. This provides the opportunity for the energy curtain to dry, eliminating a situation in which water droplets would fall on your crop.

## **Correction Programs Now Have Six Periods**

More and more users are discovering the benefits to be had from the correction programs. These programs allow you to easily use different strategies based on time or conditions. In version 908 the number of periods has been increased to six, so you now have even greater flexibility to accommodate special conditions in your cultivation.

## **Energy Curtain Program**

A completely new energy curtain program was developed for version 907. Now, in version 908, we have taken a second step. The meteorological influences have been made adjustable per section, enabling you to better accommodate local conditions within your greenhouse.

One important new feature is the addition of delays, which are particularly relevant when using the automated functionality within the strategy. In order to provide more flexibility, six delays are now available. Within the delays, it is possible to set dead zones and deviation sums for various factors such as temperature, radiation and irradiation.

A special aspect of this new approach is that the delays, like the influences, can be used freely within the periods. It is therefore possible to use one delay in one or more periods. These delays are also available when a correction is used. Now that the new energy curtain program offers so much more functionality, the legacy energy curtain program will eventually be discontinued.

## **Daily Temperature Control: Now More Possibilities**

The daily temperature control is one of the unique controls within the Connex process computer. This control adapts the ventilation or heating temperature within limits to achieve the desired daily temperature. This control has now been expanded to allow regulation based on plant temperature as well. It is also possible to adjust the ventilation and heating temperature independently of each other.

## **Greater Insight into the Heat Regulation per Section**

The heating control is a complex system that we strive to present in the most clearly understandable way possible. To provide better insight into the calculations that take place to optimally control your heating system, the overview has been expanded and optimized. This gives you better insight into the power calculations for the heating program.

## Maximum Boiler Power is Manually Adjustable

The maximum boiler power is now manually adjustable. This makes it possible to limit the boiler to make greater use of the CHP. For this setting, too, temporary settings are available.

## Difference Between Inside and Outside Enthalpy

In horticulture we are also hearing more and more about enthalpy. In the previous version we already added this variable to the measurement summary. In version 908 we also show the outside enthalpy (an RH sensor is required) and the inside/outside difference per section. This difference value is also available as a separate influence in the various schemes. The unit for enthalpy has been changed to kJ/kg.

## Immediate Draining of Ebb and Flood Floors in Event of Malfunction

A malfunction in the wet system is always problematic. Especially for ebb and flood floors, this is a point that requires extra attention. After all, the crop is standing in water and must not remain in this condition for too long. In the new version it is possible to immediately drain the floors in the event of a malfunction. If you do not use this functionality, the floor will remain full until the malfunction has been rectified.

## Vialux Flow Control Improved

The Vialux flow control has also been changed. The installer has more setting options for the V1 valve. This makes it possible to further optimize the flow control. The improved flow control results in improved UV metering, which increases overall efficiency.

## Bug Fixes and Maintenance

To keep the process computer functioning optimally, bug fixes and maintenance are periodically required. Once again in this version we have resolved many quirks and made lots of changes. This keeps your process computer safe and reliable.

## New Module: E-line Discharge Decree

From January 1, 2018 it is mandatory in The Netherlands that discharge water be treated before it is discharged into the sewer. Priva has therefore introduced Vialux E-Line, a BZG-approved solution, to supplement the Vialux UV disinfectors. Support for this is included in Connex 908. This includes the approved disinfection recipe and the process monitoring and registration, among other things. With a separate strategy for the treatment of discharge water, you can specify when and under what conditions the disinfection may be started. The software for hybrid systems will be available later this year.

## New Module: Universal Influences

Despite the fact that the Connex process computer includes a tremendous number of standard features for managing and optimizing your cultivation, many users will always have a few unique requirements. Priva therefore introduced “own influences,” which has been very enthusiastically received by our users. To make a good thing even better, a new module is now available in Connex: “universal influences.” This module expands upon the “own influences” and offers unprecedented flexibility in your process computer.

The universal influences module allows you to combine up to five of your own influences, with a result that is the sum, average or product. You can also choose to use the maximum or minimum value as result. Linking the universal influence to a periodic program gives you the possibility to use other influences during the day. You can then use the results of the module in any control with own influences. It is also possible to use a single universal influence outcome in various other controls. This creates a lot of flexibility in your process computer.

With this new module you can easily configure and apply your own influence in your process computer. Thanks to the way it has been implemented, it is also possible, for example, to define one specific weather influence and use it to influence both the curtain gap and the window gap in exactly the same way. So the Universal Influence Module makes it even easier to configure your process to meet your exact needs.

**Universal influence**

1	Period	Per1	Per2	Per3	Per4	Per5	Per6
2	Extra influence 1 : adjustment 						
3	Extra influence 2 : adjustment 						
5	Extra influence 4 : adjustment 						

7	Period	Per1	Per2	Per3	Per4	Per5	Per6
8	Universal influence base	20,0	0,0	0,0	0,0	0,0	0,0
9	Extra influence adjustment 1	0,0	0,0	0,0	0,0	0,0	0,0
10	Extra influence adjustment 2	-10,0	0,0	0,0	0,0	0,0	0,0
12	Extra influence adjustment 4	13,3	0,0	0,0	0,0	0,0	0,0
14	Calculation method	AVERAGE 	SUM 	SUM 	SUM 	SUM 	SUM 
15	Calc universal influence	21,1	0,0	0,0	0,0	0,0	0,0
16	Activated	YES	NO	NO	NO	NO	NO

17	Selected universal influence	PERIOD 1	21,1
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**Priva Office Direct 9 and Priva Office Direct 9 Enterprise**

Horticulture companies are getting ever larger and ever more complex, so they are adding more and more users to the Priva Office Direct package. As this use grows, you will also require a powerful operating solution for your process computer. In order to respond to this need, we are introducing Priva Office Direct 9. In addition, we are now also offering Priva Office Direct 9 Enterprise.

The major difference between Priva Office Direct 9 and the Enterprise version is the support for CPCs. While the regular version supports up to five CPCs, Priva Office Enterprise supports up to ten CPCs. Therefore, it is now possible to implement a single integrated control system even for very large projects.

All of this is possible thanks to the transition to a 64-bit architecture for version 9, which has greatly improved the performance of the entire application. This difference is very noticeable in day-to-day use: charts load faster, copying settings is quicker and reports are generated more quickly. In short, the speed and stability of the package have been vastly improved. This makes it more enjoyable to use, day in, day out.



## User Management Expanded

As a result of the scale-up, it is also becoming more common to have multiple Priva users within a single company. These users often have different read and write permissions for the various pages of the Priva Office Direct package. To support this further, in version 9 it is now also possible to assign autonomies to user profiles. This further improves your ability to manage user access to Priva systems.

## Filtering of Chart Lines

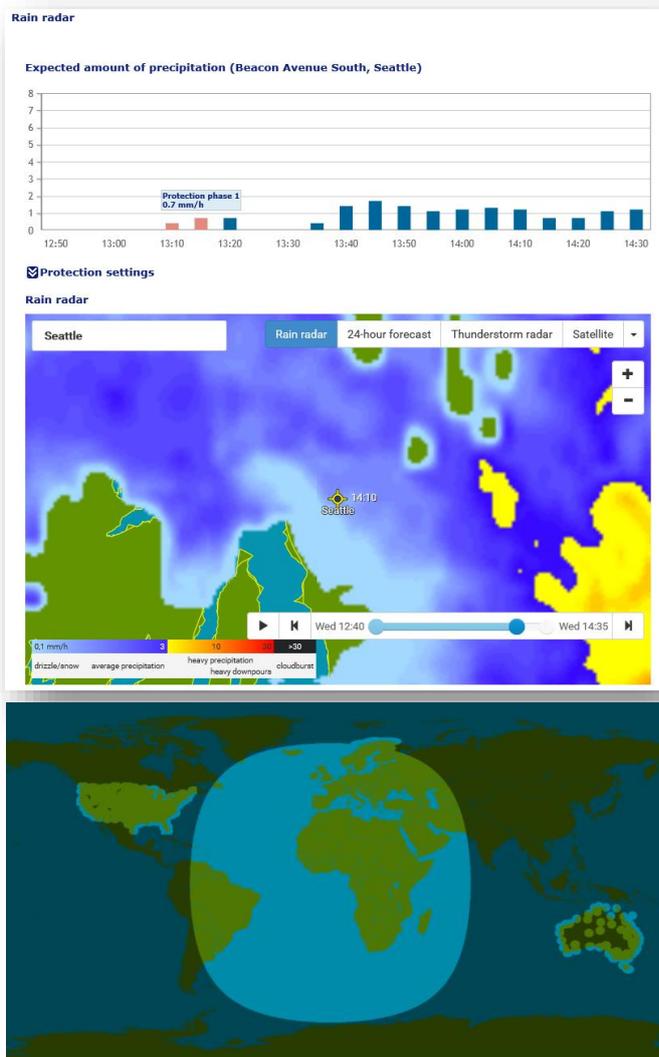
In large Priva systems the list of chart lines can become large and cluttered. To help you select the correct graph lines, inactive logs will automatically be hidden in the list. You can, of course, make these inactive logs visible again by checking the box.

## More Reliable and Responsive Alarm Page

Because companies are continuing to grow, alarms occur more frequently and there is a desire to be able to read out alarms with third party software. To better support this trend, the alarm page and the third party link have been improved. This makes this process faster and more reliable.

## Completely New Rainfall Radar

The rainfall radar module has been completely redesigned and expanded to provide global coverage. The rainfall radar page has also been redesigned, making it clearer.



## System Requirements

	Priva Office Direct 9	Priva Office Direct 9 Enterprise
<b>Max number CPC</b>	5	10
<b>Max. total CPC capacity utilization</b>	250%	500%
<b>Max. number clients:</b>	35	35
<b>Max. number data log points</b>	9999	9999
<b>Item number</b>	46310	46630
Available Priva Office direct modules are limited to the maximums shown above		

## System Requirements – Server

	Priva Office Direct 9		Priva Office Direct 9 Enterprise	
	Minimum	Recommended	Minimum	Recommended
<b>CPU</b>	Pentium 4.3 GHz	Core i5	Core i5	Core i7
<b>Internal Memory</b>	4 GB	8 GB	8 GB	16 GB
<b>Screen resolution</b>	1280 x 800	Full HD 1920 x 1080	1280 x 800	Full HD 1920 x 1080
<b>Free disk space</b>	20 GB	100 GB	100 GB	250 GB
<b>Operating System</b>	Windows 7 SP1 (64-bit) Professional or Ultimate Windows Server 2008 R2 SP1 (64-bit) Windows 8 / 8.1 (64-bit) Pro or Enterprise Windows Server 2012 / 2012 R2 (64-bit) Windows 10 (64-bit) Pro or Enterprise Windows Server 2016 (64-bit)			
<b>Internet Browser</b>	Internet Explorer 11			
<b>Software</b>	Microsoft .Net Framework 2.0 Microsoft .NET Framework 3.5 SP1 (Windows 8, Windows 8.1) Microsoft .NET Framework 4.5.1 (Windows 8, Windows 8.1) SQL Server Express 2008 R2 (Windows 7, Windows 8 / 8.1, Windows Server 2008 R2) SQL Server Express 2012 (Windows 7, Windows 8 / 8.1, Windows Server 2008 R2, Windows Server 2012, Windows Server 2012 R2) SQL Server Express 2014 (Windows 7, Windows 8 / 8.1, Windows 10, Windows Server 2008 R2, Windows Server 2012, Windows Server 2012 R2)			
<b>Ethernet network</b>	100/1000 Mbps (UTP-cat 5e)			