HOMEVISION® PRO

Control System for VentoVind™ and crawl space dehumidifiers CTR STD-TT and CTR 300TT2

USER MANUAL







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Area of use

HomeVision® Pro has been developed and designed for wireless control and monitoring of Corroventa CTR STD-TT and CTR 300TT2 crawl space dehumidifiers as well as VentoVind™, adaptive ventilation of cold attic spaces.

There are two versions of the control unit, one for crawl spaces and one for VentoVind™ but the control panel is common and compatible to both.

For easy monitoring, the control panel presents operating statistics in the form of graphics e.g. average temperature and average relative humidity. It also shows any operational alarms and service reminders such as filter replacement. The control panel also stores operational data on a USB stick in a format which can be read in Excel or corresponding software.

Each control panel can connect up to 8 control units so even if the property requires more than one dehumidifier or perhaps both crawl space dehumidification and VentoVind $^{\text{TM}}$, all control and monitoring occurs from the same place, as long as there is sufficient radio reception.

- Monitoring crawl space climate, temperature and humidity
- Monitoring and controlling VentoVind™
- Operational indicators and operational alarms
- Easy to install wireless control panel
- Service reminders
- Graphic display with simple user interface
- Expandable the control panel can control up to eight control units.



Manufacture directive

HomeVision® Pro has been electrical safety tested and EMC tested. HomeVision® is CE labelled.

Disclaimer

- Incorrect installation and/or incorrect handling can cause property damage as well as injury.
- The manufacturer assumes no liability for damage arising as a result of failing to follow these
 instructions, not using the machine as intended. Such damage is not covered by the
 warranty.
- The warranty applies to damage to the machine caused by material or manufacturing defects and does not cover consequential failure.
- The warranty does not apply to consumables or to normal wear.
- It is the responsibility of the purchaser to inspect the goods upon delivery and to ensure its function according to the instructions in the manual during use.
- Changes or modifications to the machine must not be performed without written permission from Corroventa Avfuktning AB.
- The product, technical data and/or installation and operating instructions are subject to change without notice.
- These user instructions contain information protected by copyright laws. No part of this document may be reproduced, stored in an information storage system or transmitted in any way or by any means without Corroventa AB's written consent.

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Safety information

This device is not intended for use by persons with physical, mental or sensory impairments which affect their ability to operate or understand the equipment nor other persons lacking the necessary skills or experience, unless supervised or instructed by another person with responsibility for their safety.

Children may only use the device under the supervision of an adult to ensure that the device is not used as a toy.

Electrical installations carried out in connection with dehumidifier and HomeVision® installation must be done by a qualified electrician in accordance with local and national regulations.

- 1. Read and observe the safety information in the manual for the dehumidifier to be installed and/or used.
- 2. Incorrect settings of HomeVision® or VentoVind™ control system can cause damage to the property and/or the equipment as well as excessive energy consumption.
- 3. HomeVision Control unit for crawl space dehumidifier is connected by cable to the dehumidifier and is placed in the crawl space at approximately half the height of the space in such a way that it is not affected by:
 - a. Dry air from the dehumidifier.
 - b. Wet air from the dehumidifier.
 - c. Radiation from surfaces hotter than the ambient air.
 - d. Radiation from surfaces colder than the ambient air.
- VentoVind[™] control unit is connected to grounded, 230V socket with 10A fuse, maximum 16A fuse.
- 5. VentoVind™ sensors are installed as follows:
 - a. The indoor sensor is positioned at approximately half the height of the attic space and approximately in the middle of the space so that its measurement values are representative of the space.
 - b. The outdoor sensor is positioned on the gable end pointing north protected from sunlight and rain.
- 6. Position the control panel:
 - a. in a hall or similar area that is usually frequented so that operational alarms from the system are quickly detected.
 - b. so that small children cannot access it, thus preventing unintentional setting changes.
- 7. Since the aim is to permanently supply the control panel via the supplied battery eliminator, do not leave batteries in the control panel as many battery types and brands have a tendency to leak as they age.
- 8. Using electrical equipment in very damp or wet conditions can be dangerous. Do not operate the dehumidifier if it or the Control unit is standing in water.
- 9. Water must not come into contact with the dehumidifier's or HomeVision™ electrical components. If it does, ensure that they are dried thoroughly before the system is used again.
- 10. It is recommended that the wall socket that supplies the dehumidifier and thus also the control unit is protected by a circuit breaker to minimise the risk of electric shock.
- 11. Do not damage the cables. They must nor run through water or over sharp edges.
- 12. HomeVision® and VentoVind™ must not be used with accessories other than those described in this manual or approved by Corroventa Avfuktning AB.

Contact the supplier of this dehumidifier for further advice on the safety and use of the product.



Relative humidity and its impact on materials

All air contains a greater or lesser amount of moisture but we can't see it with the naked eye until it appears in the form of small water drops against a cold surface of metal or glass. However, before it is visible, moisture is already causing problems by affecting materials and manufacturing processes, causing corrosion and growth of micro-organisms. In Scandinavia, in particular, one must always assume that it is humid due to large areas of water in the thousands of lakes and surrounding seas. Air humidity is measured and is often given in relative humidity (%RH), which is a measure of how much water the air contains in relation to how much it can maximally contain at a given temperature. The higher the temperature, the more water the air can hold but it is the relative humidity which is calculated, and which must be controlled.

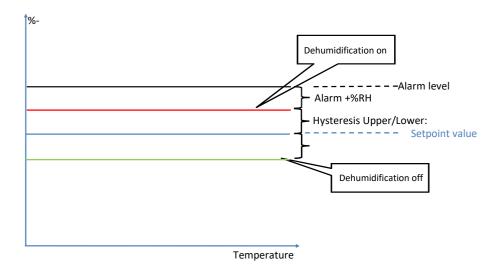
At 100% RH the air is saturated and the moisture falls in the form of small water droplets. Steel corrodes at 60% RH and at 70% RH there is a risk of mould. A rule of thumb is that 50% RH is a good climate for most materials but here in Scandinavia, it is rarely so low. The annual average value in most places is instead around 80% RH and can be equally high in both summer and winter.

Controlling humidity

Installing the dehumidifier according to the instructions and manual, provides the conditions for establishing and maintaining a climate that prevents rot, mould and bad odours in the space. HomeVision® with its wireless control panel offers easy and convenient monitoring of the climate from the accommodation and allows the user to select between Fixed RH regulation and MGI Regulation (mould index regulation).

Fixed RH regulation

With the regulation principle Fixed RH, a setpoint value for the humidity is set, a value to control around. Furthermore, an upper and a lower hysteresis are set as well as an alarm limit that defines the alarm level at which, if reached, an alarm appears on the control panel. The chart below is not to scale, it has the sole purpose of clarifying the principle and parameters.





To help understand this principle here is an example that can be studied in parallel with the chart:

```
Setpoint, %RH:

Activation: Setpoint value + Hysteresis Upper = 65% +

4% = 69% Off: Setpoint value + Hysteresis Lower = 65% -

4% = 61%

Added to the activation level to give alarm level.

Alarm level = Setpoint value + Hysteresis Upper + Alarm =

65% + 4% + 10 % = 79%
```

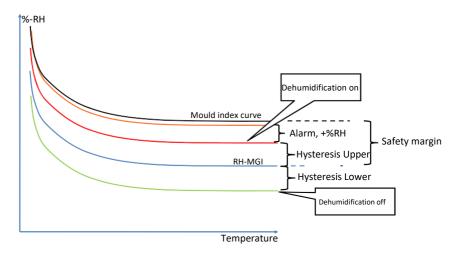
As seen in the example, the setpoint value must not be mixed up with the highest permitted level because the setpoint value exceeds the corresponding Hysteresis Upper before the dehumidifier is activated. At high moisture load, relative humidity can increase slightly before the dehumidifier makes an impact and the relative humidity in the crawl space begins to drop. The result of this is that the setpoint value, if not entirely accurate, can be seen as an upper limit for the humidity's average value over a longer period, and for this there must be a margin, greater than the upper hysteresis, for the humidity at which damage occurs.

The reason the user is given the option to influence hysteresis is that it must be possible to adjust the system for optimum operating profile in any given location. Too narrow an interval, the range given by the upper and lower hysteresis provides many starts and stops of the dehumidifier and therefore an increase in equipment wear. Too great a range means that, at each activation, the system drives down the humidity unnecessarily low resulting in increased energy consumption.

Mould index regulation

HomeVision® Pro permits, in addition to traditional, fixed, regulation of the relative humidity, application of mould index regulation, MGI regulation. This regulation method uses the fact that the mould growth, in addition to the humidity, is also temperature dependent. At lower temperatures, higher humidity can be tolerated without risking mould growth and the positive result of this is of course the potential to save energy.

The regulation principle, as with the energy saving aim, implemented in HomeVision® Pro can be clarified with the help of the chart below. The chart is not to scale but is intended only to clarify the principle and actual parameters.





The upper curve, the mould index curve, is programmed in HomeVision® and is therefore not something that is affected by user settings. The user is asked instead to specify the desired safety margin, upper and lower hysteresis and alarm limit whose meanings are explained using the following example.

Safety margin, %RH:	-15%	Activation: Actual MI– Safety margin + Hysteresis Upper = = Actual MI – 15% + 4%
Hysteresis Upper/Lower:	+ 4%, -4%	Off: Actual MI – Safety margin – Hysteresis Lower = = Actual MI– 15% - 4%
Alarm, +%RH:	10%	Added to the activation level to give alarm level. Alarm level: Actual MI – Safety margin + Hysteresis Upper + Alarm= = Actual MI – 15% + 4% + 10 %
Actual MI = The humidity the	nt forms the lowe	er limits of mould growth for the actual

The principles are recognised from Fast RH regulation, but instead of a constant setpoint the safety margin is determined against the mould index. When it comes to hysteresis and the alarm, these work in the same way as for Fixed RH regulation.

As the reader will certainly have established, the relative humidity can be allowed to rise slightly higher in the lower temperature range, with the support of the mould index, and thus provide an energy saving. At higher temperatures, both the fixed and mould index regulation methods overlap and thus the power consumption is the same.

Delivery check

HomeVision® for crawl spaces is supplied with the following parts in the package:

Control unit for connection to CTR STD-TT or CTR 300TT2	1 x
Control panel with USB stick	1 x
Battery eliminator for control panel	1 x
Batteries for control panel, AAA cells*	2 x
Manual	1 x

HomeVision® for VentoVind™ is supplied with the following parts in the package:

VentoVind™ Control unit	1 x
Control panel with USB stick	1 x
Battery eliminator for control panel	1 x
Batteries for control panel, AAA cells*	2 x
Manual	1 x
Outdoor sensor	1 x
Indoor sensor	1 x

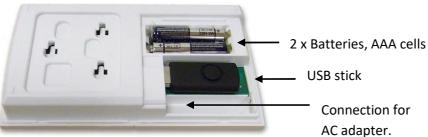
^{*)} To use the installed batteries, the plastic protection strip must be removed so that the battery terminals



come into contact with the panel. The batteries are intended for use during installation. During normal operation, the control panel must be powered via the battery eliminator and the batteries removed from the control panel to prevent leakage, which can occur in ageing batteries.

Product overview





Control unit dehumidifier

The control unit is installed with the sensor downwards.





Control unit VentoVind™

Control unit with sensors and control panel.





Installation

Installation of control unit and connection of control panel for crawl spaces

When the control unit is to be installed, also prepare the control panel by inserting its batteries and take it with you to the crawl space. Comprehensive installation instructions can be found in the enclosed installation manual for the dehumidifier. The following instructions are a brief summary.

- 1. Install the control unit, within the reach of the cable length to the dehumidifier, in a location in the crawl space where its measurement values will be representative for the surrounding climate by ensuring that:
 - The unit is positioned at approximately half the height of the crawl space.
 - The unit is not affected directly by the dehumidifier's dry air.
 - The unit is not affected by the dehumidifier's wet air.
 - The unit is not affected by radiation from heat sources.
 - The unit is not affected by radiation from surfaces colder than the ambient air.

The control unit is suspended in the cradle that is included in Mounting kit TT Multi with the sensor facing down towards the ground. The cradle is secured according to the image below.

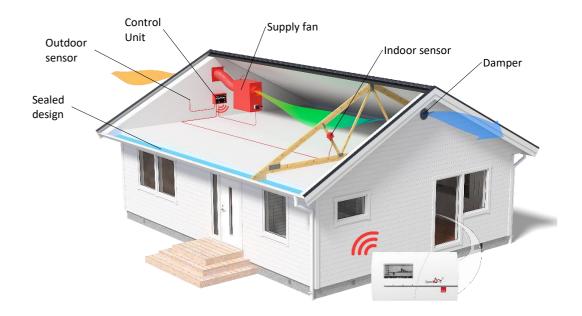


2. Connect the Control unit's cable to the dehumidifier and power the dehumidifier by connecting the power cable. Continue to point 3. for connecting to the control panel.

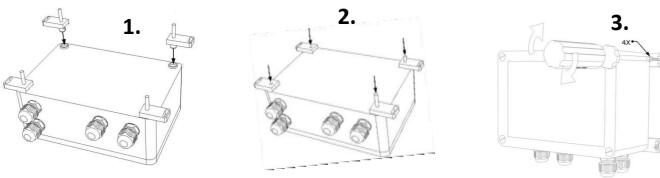


Installation of control unit and connection of control panel for VentoVind™

When the control unit is to be installed, also prepare the control panel by inserting its batteries and take it with you to the attic. Comprehensive installation instructions can be found in the enclosed installation manual for VentoVind[™]. The following instructions are a brief summary.



1. Install the supplied brackets on the control unit. Tap in the pins to secure the mountings to the control box. Then mount the control unit on a flat surface centrally and make sure it is easy to access.



Install the fan and all mounting hardware. Mount the indoor sensor so that it is representative of the ambient climate by ensuring that:

- The sensor is positioned at approximately half the height of the attic space.
- The sensor is not directly affected by the fan's incoming air.
- The sensor is not affected by radiation from heat sources.
- The senor is not affected by radiation from surfaces colder than the ambient air.

Install the outdoor sensor in a location outdoors that is protected from direct sunlight and rain, preferably under the roof overhang on the north or west gable end or under the eaves on the house's north or west side. Sensor and cable output must be pointing down.



- 2. Power the control unit and fan by connecting the power cable. Continue to point 3. for connecting to the control panel
- 3. Provided that the dehumidifier or VentoVind™ installation has been completed, power the dehumidifier or VentoVind™ control unit by connecting the power cable and getting the control panel and then continuing according to the instructions below

NOTE! The control unit is now only open to pairing for two minutes after start.

To start the control panel in battery mode for the first time, remove the plastic strip at the batteries. After completing the installation, the control panel must always be operated with the enclosed battery eliminator.

If a control unit was not connected to the control panel previously, the panel display looks like the image to the right.

Press OK to continue.

For normal pairing, select Standard, which is marked.

Press **OK** to continue.

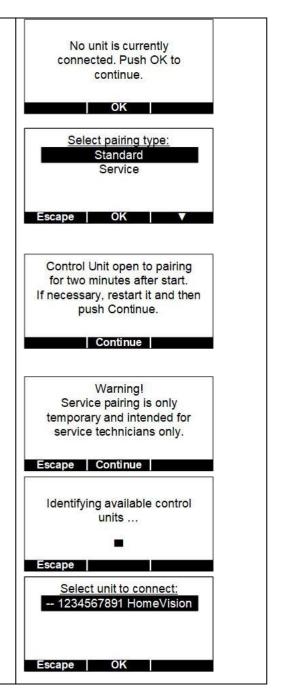
Note: Service pairing is only temporary and intended for service technicians.

The user is now reminded that the **Control Unit open to pairing for two minutes after start.** If necessary, restart the Control unit and push **Continue**.

Note: If the user selects Service pairing, a warning appears stating that this pairing is only for service technicians. If Service is selected by mistake, push **Escape** to cancel the process and restart.

The control panel now identifies units that are available for pairing. Wait until it is ready, which normally takes 30 – 40 seconds. If it takes longer, restart the Control unit and try again.

When the search is complete, the found unit(s) is/are then presented. If more than one unit has been identified, select the correct unit by checking the ID number on the reverse or short side of the Control unit. Select the unit to connect and push **OK**.





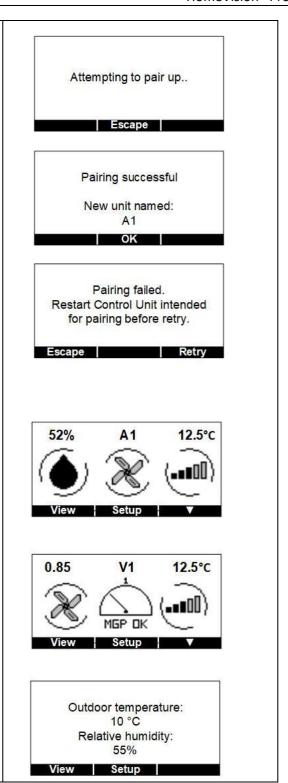
Whilst the control panel attempts to pair up with the selected unit, the screen to the right appears.

When the connection process is complete, the text found in the upper image to the right usually appears. A control module for crawl space dehumidifiers is designated A followed by the lowest available digit in the range 1 to 8. VentoVind™ is designated V followed by the lowest available digit. If the process has been unsuccessful, if two minutes have passed before the connection was established or there was a pairing error between the units, the image at the bottom right appears. Then follow the instructions and restart the Control unit before trying again. In the event of repeated failures, see chapter Troubleshooting.

If pairing is successful, press **OK** to continue to the status view, which looks like the image to the right.

A1, indicates the relevant machine designation for dehumidifier. The panel can manage up to eight units and if several units are connected, the presentation automatically switches between the different machines at five second intervals.

V1 indicates VentoVind™ units that are connected, which are designated V followed by digit 1 to 8.





NOTE!

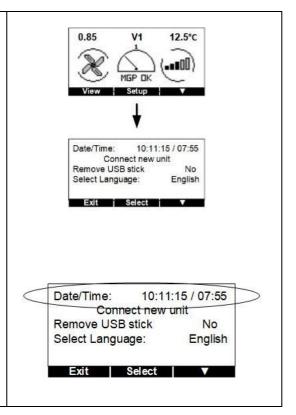
The correct date and time must be set immediately after connection of the first unit, in order for statistics and logs to be correct.

In status view, normal view, press **Setup**> to get to the Administration view where Date/Time can be found on the first row.

Press **Select** and check that the Date/Time row is marked.

Press **<OK>** to select it.

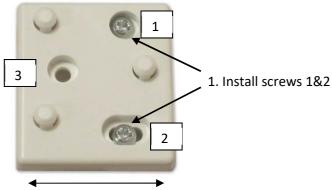
The first digit, the year, is now marked. Use the outer buttons, < ▲ > and < ▼ > to obtain the desired value and press <Next> to edit the next digit. The date is as follows: Year – Month – Day. When the last digit on the row is edited, the minutes, <Save> appears on the centre button instead of <Next>. When the correct digit has been set, press <Save> to finish setting.



Installation of control panel

After the Control unit has been installed and radio contact has been established between it and the control panel, proceed as follows:

- 1. Select a location for the control panel where there is an electrical socket within reach of the battery eliminator's cable. Before installing, ensure that the signal quality indicator shows at least two of the maximum five bars. It can take a few minutes before the signal strength is established. The control panel should be positioned where any operational alarms can be detected as quickly as possible (the screen lighting flashes in the event of an alarm). Remember that if the household has small children, the unit should be positioned out of their reach.
- Detach the wall mounting from the control panel by pulling it downwards. Install screws 1 and 2 and hand tighten. Adjust the mounting's angle and tighten the screws. Finally install screw 3. If necessary, drill, using a 5mm drill bit, and use the enclosed wall plug.



2. Adjust the angle and tighten



- 3. Remove the batteries from the control panel and connect the battery eliminator. Battery mode is only intended to operate the control panel for short periods, such as during installation and service.
- 4. Install the control panel by moving it over the wall mounting and pressing downward.

HomeVision® Pro

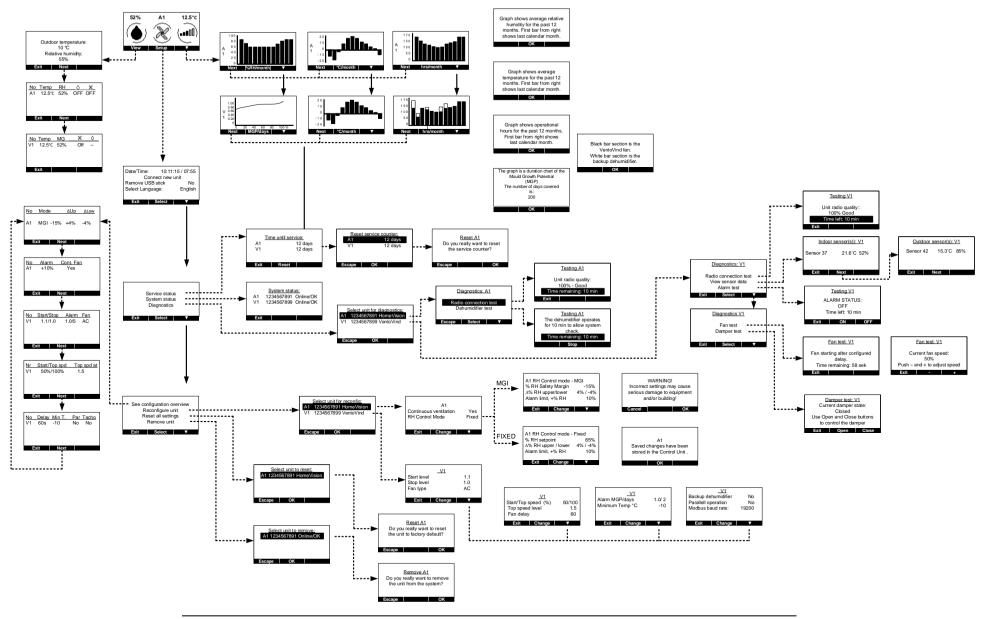
HomeVision® has an easy-to-use interface with a display and three software-controlled buttons. Software control means that the respective functions of the buttons vary with the actual menu, in order to make operation as easy as possible.

The menus that appear are pictured below, with the exception of the alarm indications and reminders that are described in separate chapters. The setting options are accessed from the status view via the setup button in the middle. The button to the left, View, presents actual data for all connected control units whilst the arrow button presents operational-, temperature- and humidity statistics. The first bar from the right in the statistics views is the current month.

When using HomeVision®, remember the following:

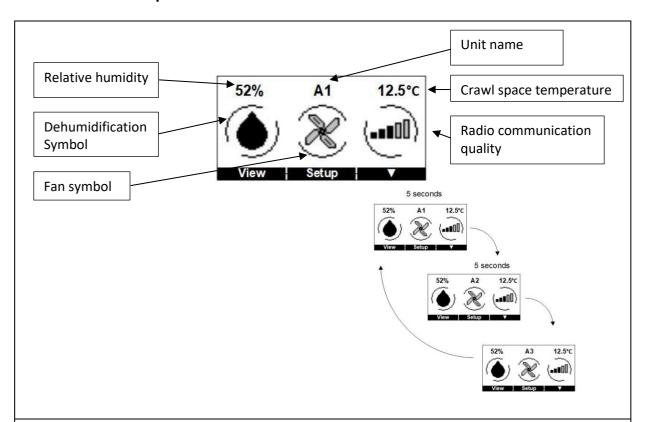
- If no button is pressed, the presentation in the display usually returns automatically to the status view after 30 seconds, the only exception to this is when one of the diagnostic menu tests has been activated.
- If no button is pressed, the background lighting goes out automatically after 15 seconds. When the lighting has gone out, the first button press has no function other than to turn the lighting on.
- The control unit that is connected to the humidifier is not dependent on the control panel for its own function. If the contact between them is broken, the Control unit continues to control the dehumidifier according to applicable settings.







Status view Crawl space



The current temperature and humidity are presented in status view. The user can also see whether dehumidification is in progress and if the fan is active or not. The right-hand symbol with the bars shows the quality of the radio connection between the control panel and Control unit.

The indications in the lower part of the display show:

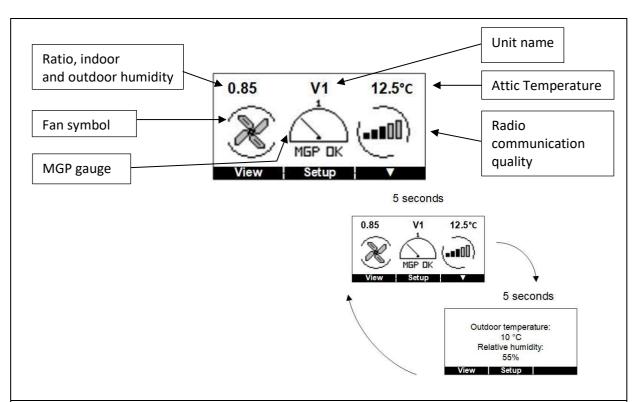
- Dehumidification. When the water droplet is sometimes filled and sometimes empty dehumidification is in progress.
- Fan operation if the dehumidifier's built-in fan is currently off or on. When the symbol is moving, the fan is running.
- Signal quality, a measurement of how good radio contact is between the control panel and Control unit in the crawl space. The more bars that are filled the better the reception. If reception disappears the bars begin to flash.

 Note that the signal quality is a measurement of how many data packages are sent during the first transmission. The level normally increases over time and can then vary slightly. A system that is paired as standard reconnects automatically after a power cut. If the Control unit is restarted it takes about three minutes before contact is reestablished.
- Relative humidity % shows the humidity in the space being dehumidified.
- Temperature indicates the actual indoor temperature in the space being dehumidified.

If several control units are connected to the control panel the presentation scrolls around between them at five second intervals. Unit description A1 indicates that the status view from Dehumidifier A1 is currently being presented.



Status view VentoVind™



In the status view for VentoVind™ the actual ratio between the moisture content in the attic space and the moisture in the outdoor air is presented in the upper left corner. When the ratio is less than one, the air in the attic is dryer than the outdoor air and vice versa. It is this ratio that is used to control the ventilation.

The actual temperature of the attic is shown in the upper right-hand corner. The indications in the lower part of the display show:

- Fan symbol. When the symbol is moving, the fan is running and the attic is ventilated.
- MGP gauge. Shows the actual Mould Growth Potential, a value that should be below one (1.0).
- Signal quality, a measurement of how good radio contact is between the control panel and Control unit in the crawl space. The more bars that are filled the better the reception. If reception disappears the bars begin to flash.

Note that the signal quality is a measurement of how many data packages are sent during the first transmission. The level normally increases over time and can then vary slightly. A system that is paired as standard reconnects automatically after a power cut. If the Control unit is restarted it takes about three minutes before contact is re-established.

If several control units are connected to the control panel the presentation scrolls around between them at five second intervals. Unit description V1 indicates that the status view from VentoVind™ V1 is currently being presented.

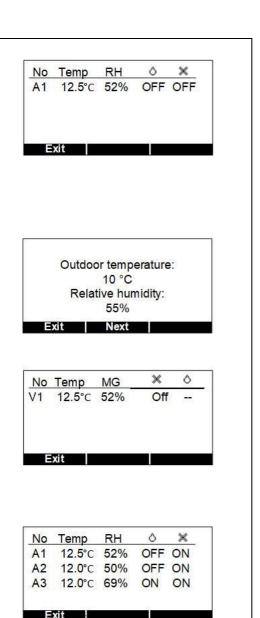


Overview view

The overview view that is accessed using the left-hand button status view, presents the status of all units connected to the system in an overview table. For crawl space humidifiers, the reported temperature and humidity as well as whether dehumidification is in progress and the fan is active is shown according to the image at the top right. The respective symbols are recognised from status view.

For VentoVind™ an image appears with outdoor temperature and relative humidity, information that can be of general interest. The following view presents the temperature of the attic, the Mould Growth Potential as well as whether the fan is active or not. The last column with the dehumidifier symbol refers to a backup dehumidifier, if one is connected to the VentoVind™ unit. If one is connected, it is indicated whether it is currently running or switched off, "Off" or "On". If such a unit is not connected "--" appears.

All views appear if both crawl space and VentoVind™ units are connected. Furthermore, if more than three control units of the same type are connected, an arrow appears on the right-hand button and this can then be used to scroll to the other units.





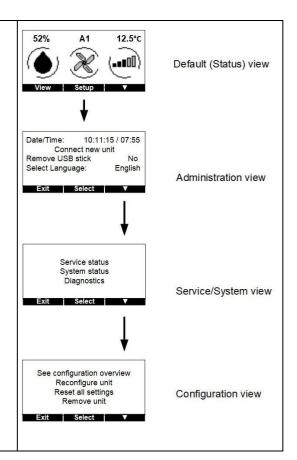
Setup view

The system's different setting options can be accessed from Status view, by using the middle **<Setup>** button.

The first level of this menu tree is called **Administration view**, which contains functions to set the date and time, to connect a new unit, to remove the USB stick and to select language.

Press < ▼> from Administration view to access the second level of this menu tree. This level is called Service/System view and has functions to see and reset the service time, to see the system status in the form of which units are connected and their status as well as diagnostics, functions intended as aids during function checks and troubleshooting.

A further press of < ▼ > accesses the third and final level in this menu tree, which is called the **Configuration view**. From here the user can see an overview of all the units' settings, change settings in the various units, reset units to factory default configuration and also remove units from the system.



Statistics view

The statistics views can be accessed using $< \nabla >$ from the status view. These present three different graphs for each connected machine.

For crawl space machines, average relative humidity, average temperature as well as the number of operating hours and all these are shown for the last 12 months. For VentoVind™ a steady start graph for MGP is shown that reproduces the past year, average temperature and operating hours.

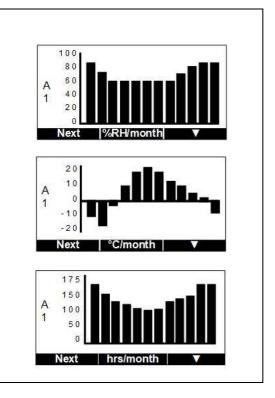
The machine that is reflected is constantly visible through the unit designation, A1 or A2, etc., found in the left margin

In each presentation view the middle button's symbol flashes and a push of this button gives an explanation for the relevant graph.

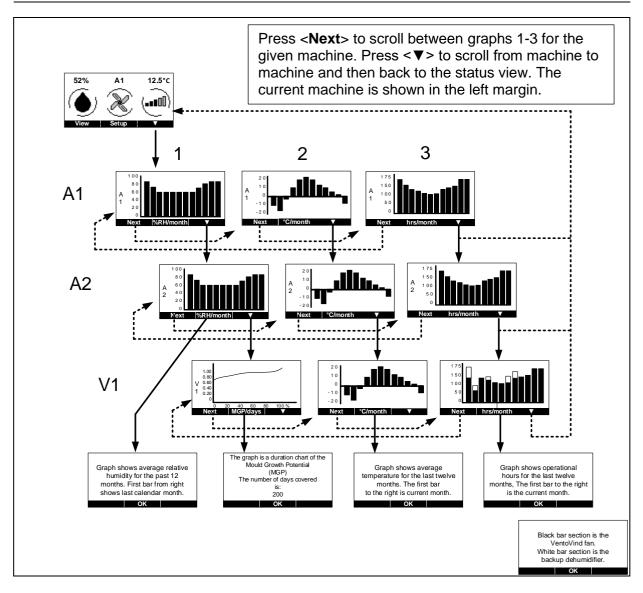
The first machine that appears is A1 or V1. Press

<Next> to see the next graph for this machine. Press <▼>
to scroll to the next machine.

The first bar from the right in the graph is the current month.







Set date and time

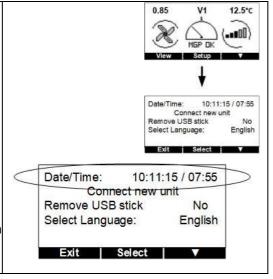
In status view, normal view, press **<Setup>** to get to Administration view where Date/Time can be found on the first row.

Press **<Select>** and check that the Date/Time row is marked.

Press **<OK>** to select it.

The date is as follows: Year – Month – Day.

The first digit, the year, is now marked. Use the outer buttons, <▲> and <▼> to obtain the desired value and press <Next> to edit the next digit. When the last digit, the minutes, is edited, <Save> appears on the centre button instead of <Next>. When the correct digit has been set, press <Save> to finish setting.



Connecting a new unit



In the event of a new installation or other situation where the control panel does not already have a control unit connected, see chapter Installation of control unit and connection of control panel.

NOTE!

If a new control unit is to be connected that replaces an older/other control unit, ensure to remove the previous unit from the system before connecting the new one. In this way, the identity is made available to the new unit, which is easier and better for users who perhaps already know which unit number corresponds to which machine.

In status view, normal view, press **<Setup>** to get to the Administration view where "Connect new unit" can be found.

Press **<Select>** which marks the first row, Date/Time. Scroll down to "Connect new unit" using **< ▼>**. Press **<OK>**.

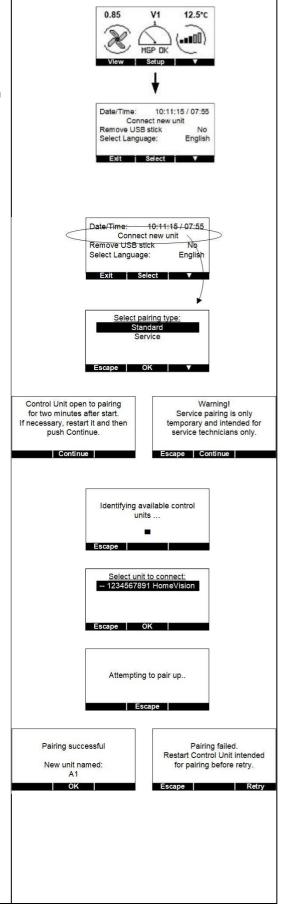
For normal installation, then select the option Standard, which means that the units automatically re-establish the connection after a power cut.

After selecting pairing type, for the Standard option, information is presented stating that the Control unit is only open to pairing for two minutes after start. For the service option, a warning is instead presented stating that the pairing is not permanent. Press **<Continue>**.

The control panel now searches for available units. Wait until this process is complete, which normally takes 30 to 40 seconds. If it takes longer, restart the Control unit and try again.

When the search is complete a list of available units appears. Control units that are already connected to the control panel are not in this list. There is usually just one control unit in the list but, if multiple control units within range have just been started, the list may be longer. Select the desired unit, if necessary, by comparing presented identities with the serial number on the back of the control unit, and then press **<OK>**.

When the unit has been selected, the system tries to connect, exchange relevant information to establish contact. Wait until this process is complete whereupon the screen presents one of the options at the bottom





right. If the connection was successful, the assigned unit name is also presented, the letter A for crawl space machines and the letter V for VentoVind™, followed by the lowest available number in the series 1 to 8.

Remove the USB stick

Note: Always use this function when removing the USB stick. The function ensures that writing to memory is interrupted so that it can be removed without risk of damaging the memory itself or its files.

In status view, normal view, press **<Setup>** to get to the Administration view where "Remove USB stick" can be found.

Press **<Select>** which marks the first row, Date/Time. Scroll down to "Remove USB stick" using **<** ▼ >. Press **<OK>**.

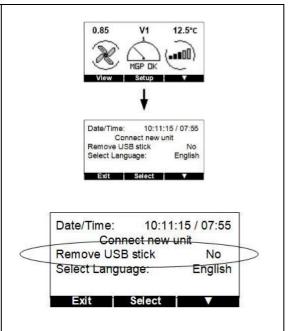
Use $< \triangle >$ or $< \nabla >$ to change the option from No to Yes.

Press **<Save>** and wait until the selection is confirmed and the screen with the text "The USB stick can now be safely removed" is presented.

Remove the control panel from its wall mounting, open the battery cover by sliding it outwards and then remove the USB stick. When the USB is reinserted, insert it all the way into the USB port on the control panel and verify that the indicator on the USB stick illuminates and soon begins to flash, indicating that writing is in progress. On the USB stick supplied with the panel, this indicator is a small LED which can be seen through a small hole at the top.

NOTE!

To study the log file, immediately make a copy of the .csv file found on the USB stick and work with this copy instead of the original. This minimises the risk of losing, modifying or corrupting the log file. The USB stick must be reinserted as soon as possible so that logging can be resumed and no, or minimal data is lost.





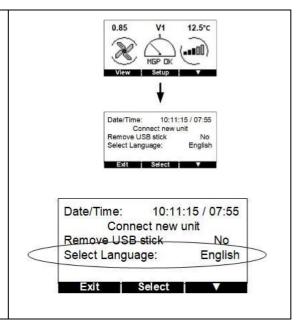
Selecting language

In status view, normal view, press **<Setup>** to get to Administration view where "Select Language" can be found.

Press **<Select>** which marks the first row, Date/Time. Scroll down to "Select Language" using **< ▼>**.

Press <OK>.

Use $< \triangle >$ or $< \nabla >$ to select the desired language. Press <Save> and the language has now been reset.



Service status – Reset service counter

In the status view, normal view, first press **<Setup>** and then **<** ▼ > to get to the Service/System view.

In the Service/System view press **<Select>** to mark the first row Service Status. Press **<OK>** to select this function.

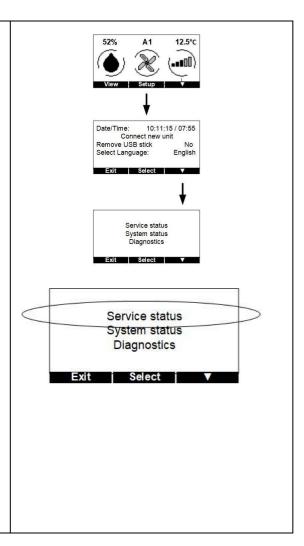
The system now presents a list of the paired units and, for each of these, how many days remain until service is required.

After a service has been carried out and the counter should be reset, select **<Reset>** at the Time until service presentation.

Then select the unit to be reset and press **<OK>**.

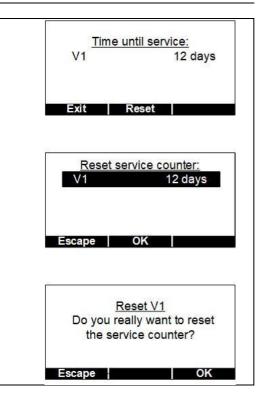
To prevent unintentional resets, the system then asks a confirmation question. If the intention was to reset the counter for the selected unit, press **<OK>**.

Once the selection has been confirmed, a confirmation is presented stating that saved changes have been stored in the Control unit. If this confirmation does not appear, the message has not reached the unit. Repeat the procedure.





A service reminder appears automatically on the screen one year (365 days) after installation or last service.



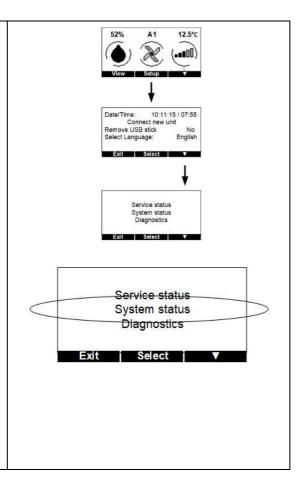
System status

In the status view, normal view, first press **<Setup>** and then **< ▼** > to get to the Service/System view.

In the Service/System view press **<Select>** to mark the first row. Press **< ▼** > to scroll down to System status. Press **<OK>** to select this function.

The system now presents a list of the paired units, their respective serial number, whether they are current at that moment, if the radio connection works and if they report any alarms, or if everything is in order.

It should be noted that all reported alarms are presented automatically and the user normally therefore has no reason to use this function.





Diagnostics – Test of radio connection

In the status view, normal view, first press **<Setup>** and then **< ▼** > to get to the Service/System view.

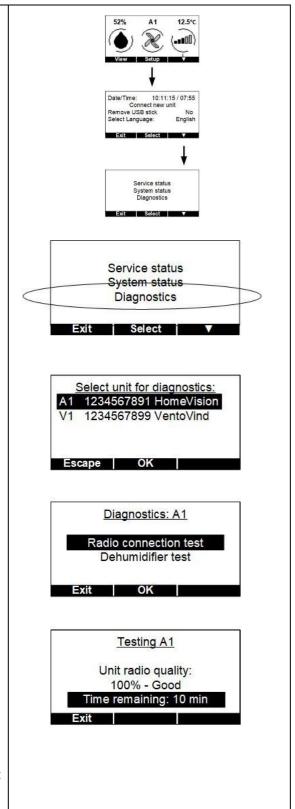
In the Service/System view press **<Select>** to mark the first row. Press **< ▼** > to scroll down to Diagnostics. Press **< OK>** to select this function.

Select the unit to diagnose. If only one unit is connected, it is already marked, Press **<OK>**.

Press **<Select>** and then select "Radio connection test", which is already marked, by pressing **<OK>**.

The radio connection test has now started and, as the counter shows, runs for a maximum of 10 minutes if the user does not cancel it. The aim of this test is for the user, for example, to evaluate a proposed location of the control panel by establishing whether the radio connection works there.

Remember that the system shows the signal quality, a statistical measurement of the proportion of messages that are sent between the units that get through without having to be resent. This means that changes, both up and down, are slightly delayed and thus slower. Do not compare with the signal strength that is shown on a mobile phone, a measurement value that can fluctuate rapidly.





Diagnostics - Test of crawl space dehumidifier

In the status view, normal view, first press <Setup> and then < ▼ > to get to the Service/System view.

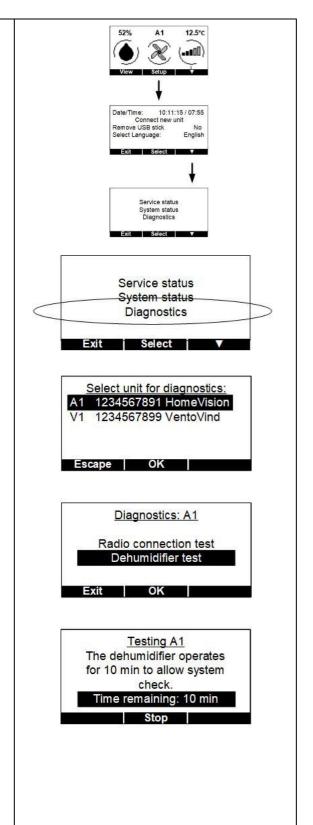
In the Service/System view press **<Select>** to mark the first row. Press **<▼>** to scroll down to Diagnostics. Press **<OK>** to select this function.

Select the unit to diagnose. If only one unit is connected, it is already marked, Press **OK**>.

Press **<Select>** and then select "Dehumidifier test" which is already marked by pressing **<OK>**.

The dehumidifier test has now been started which means that regardless of the prevailing climate and settings the fan and heater are now active in the dehumidifier. The user can now easily establish whether the fan is working, that the intended air movement is achieved and that the humid air that is led out of the space is warm – good indications that all is as it should be.

Note that the fan always continues for five minutes after the heater has been switched off. In other words, if the system does not have continuous fan operation, it will take 15 minutes before the fan stops even if the test duration is only 10 minutes.





Diagnostics – VentoVind™, See Sensor data

When troubleshooting VentoVind™ it may be of help to check which sensors are connected and working. To do this, follow the instructions below:

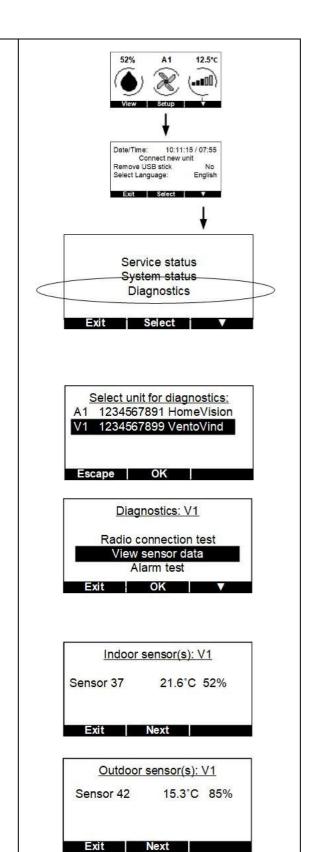
In the status view, normal view, first press <Setup> and then < ▼ > to get to the Service/System view.

In the Service/System view press **<Select>** to mark the first row. Press **< ▼** > to scroll down to Diagnostics. Press **<OK>** to select this function.

Select the unit to diagnose. If only one unit is connected, it is already marked, Press **<OK>**.

Select "View Sensor data" by pressing **<Select>** and then **< ▼** > to scroll down. Confirm the selection with the **<OK>** button.

All connected indoor sensors are displayed on the first screen. Scroll to the outdoor sensors with the <Next> button.





Diagnostics – VentoVind™, Fan test

It may be useful to test run the fan at installation, adjustment of parameters and during troubleshooting. Follow the instructions below:

In the status view, normal view, first press **<Setup>** and then **<▼>** to get to the Service/System view.

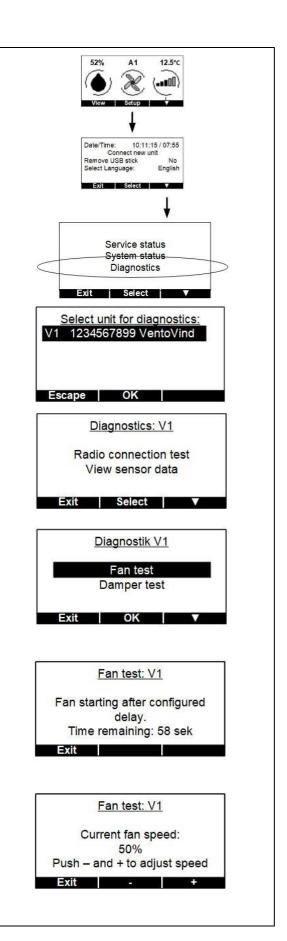
In the Service/System view press **<Select>** to mark the first row. Press **< ▼** > to scroll down to Diagnostics. Press **<OK>** to select this function.

Select the unit to diagnose. If only one unit is connected, it is already marked, Press **OK**>.

Select "Fan test" by pressing < ▼ > from the initial diagnostics screen. Then press <**Select>** so that "Fan test" is marked and confirm the selection by pressing <**OK>**.

When the fan is tested, the entire sequence is tested by opening any motor dampers. The fan therefore starts with a set delay. This also applies if motor dampers are not connected.

The view for the fan test looks a little different depending on the set fan type. If the system is instead set to fan type EC or AC fan, the fan speed can be adjusted up and down in 10 % increments using the <+> and <-> buttons as seen in the image at the bottom right. If the system is instead set to CR, for relay control of the fan, the user can only start and stop the fan.





Diagnostics – VentoVind™, Damper test

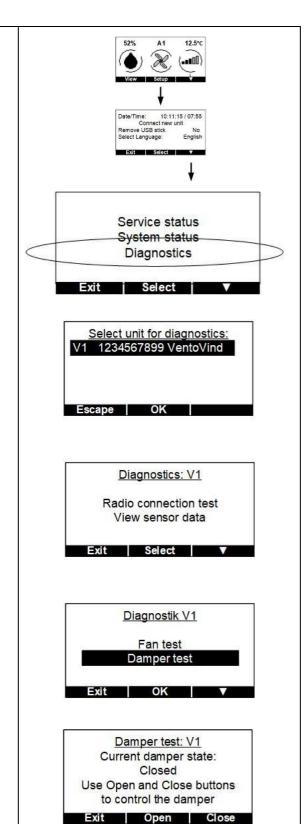
In the status view, normal view, first press **<Setup>** and then $< \nabla >$ to get to the Service/System view.

In the Service/System view press **<Select>** to mark the first row. Press **< ▼** > to scroll down to Diagnostics. Press **<OK>** to select this function.

Select the unit to diagnose. If only one unit is connected, it is already marked, Press **OK>**.

Select "Damper test" by pressing <▼> from the initial diagnostics screen. Then press <**Select>** followed by <▼> so that "Damper test" is marked. Confirm the selection by pressing <**OK>**.

The damper test menu enables the user to manually open and close the damper, as seen in the bottom right image.





See overview of settings for all units, Crawl space

In the status view, normal view, first press <Setup> and then <▼> twice to get to the Settings view.

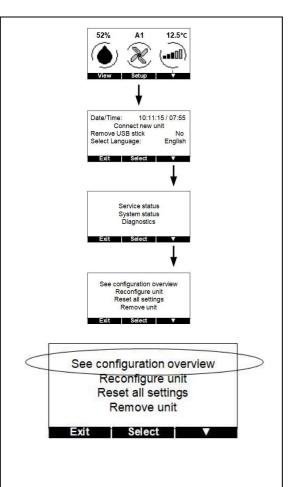
In the Settings view, press **<Select>** to mark the first line, "See configuration overview". Press **<OK>** to select this function.

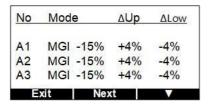
The aim of this function is to allow the user to see an overview of the different units' settings in order to check easily that they are all identically set, or that there are intentional differences, or what the purpose of the given installation is.

If more than three units are installed in the system, the right-hand button has the marking < ▼ > and allows the user to scroll down the list of units.

For crawl space dehumidifiers, the units' selected regulation principles, Fixed or MGI with their respective setpoint values and safety margins, followed by respective upper and lower hysteresis are presented in the first of the images.

The second of the images, reached via the **<Next>** button, presents the set alarm level and whether continuous fan is activated or not.





No	Alarm	Cont. Fan	
A1	+10%	ON	
A2	+10%	OFF	
A2	+10%	ON	
	xit	Next . ▼	



See configuration overview for all units, VentoVind™

In the status view, normal view, first press **<Setup>** and then **< ▼** > twice to get to the Settings view.

In the Settings view, press **<Select>** to mark the first line, "See configuration overview". Press **<OK>** to select this function.

The aim of this function is to allow the user to see an overview of the different units' settings in order to check easily that they are all identically set, or that there are intentional differences, or what the purpose of the given installation is.

If more than three units are installed in the system, the right-hand button has the marking $< \nabla >$ and allows the user to scroll down the list of units.

These screens show:

Start/Stop – the ratio at which the VentoVind[™] fan must start respectively stop. Alarm – MGP level and duration in days to trigger an alarm about incorrect climate.

Fan – Present fan selection. Can be EC, AC or CR where the latter, CR, means that the fan is controlled via relay and thus is not speed controlled.

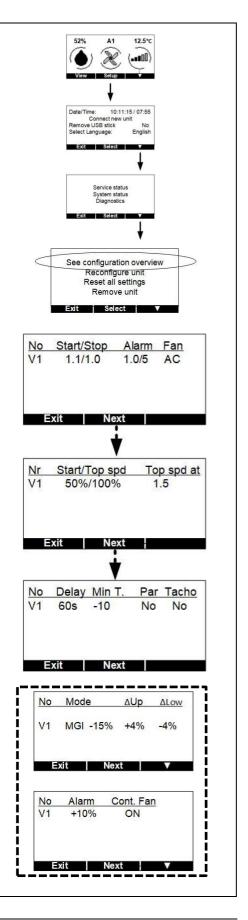
Delay – delay of fan start towards motor damper. When the system is activated, the first damper is permitted to open before the fan starts in order to prevent noise.

Min T – minimum temperature at which the system operates, a limit to prevent cooling the space too much.

Par – Parallel operation, regards whether a backup dehumidifier (if installed), is to operate in parallel with the VentoVind™ fan or not. Usually, this must be set to No, which means that if the dehumidifier cuts in, the VentoVind™ fan stops.

Tacho – (Can only be used with EC fan) Shows whether the fan that is used has a tachometer signal connected to the VentoVind™ control unit in order for the system to know to give an alarm if the fan seems to have failed.

The last framed screens to the right only appear if a backup dehumidifier is connected. (Backup dehumidifier only supplied as an option when ordering)





Reconfigure unit (by regulation parameters), Crawl space

In the status view, normal view, first press <**Setup>** and then <**▼>** twice to get to the Settings view.

In the settings view, press **<Select>** and then **<** ▼ > so that the "Reconfigure unit" row is marked.

Press **<OK>** to select this function.

The panel now asks the user to select the unit to be reconfigured. If required, press < ▼ > to scroll to the relevant unit. If the relevant unit is already marked, press < **OK**> to continue.

Continuous ventilation – Controls fan operation. If continuous ventilation is activated, the fan runs continuously. If the function is not activated, the fan only runs during dehumidification.

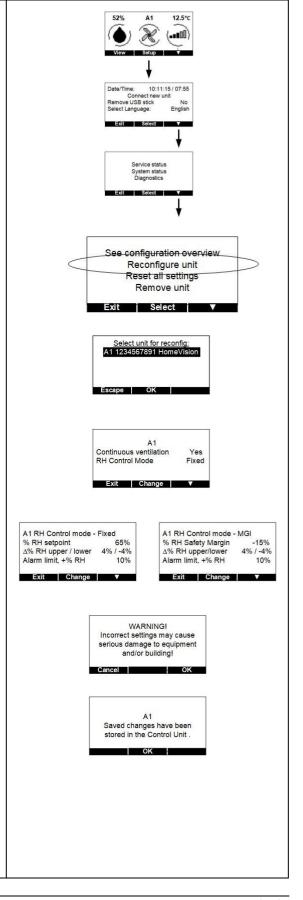
RH control mode - can either be Fixed or MGI. Fixed control is the most traditional with a set setpoint in %RH for humidity. MGI, (Mould Growth Index) means that the maximum permitted humidity is temperature-dependent and that the system is controlled by a defined safety margin. An explanation of MGI can be found at the beginning of this manual.

To change parameters, press <Change> and scroll using < ▼ > so that the desired row and parameter is marked. Press <OK> and then use the arrow keys to get to the desired selection, for example Yes or No for ventilation. Confirm the selection with <Save>.

From the first screen, < ▼ > leads to the next screen, which, depending on selected control mode, presents the actual parameters for Fixed or MGI regulation. To change parameters, perform the same procedure as for the previous screen.

Note that when the user selects to change a parameter, a warning text always appears to prevent unintentional changes.

When the change has been made and saved, if everything is successful, a confirmation appears to store the changes in the Control unit. If the confirmation does not appear, repeat the procedure.





Reconfigure unit (by regulation parameters), VentoVind™

In the status view, normal view, first press <**Setup>** and then <**▼>** twice to get to the Settings view.

In the settings view, press **<Select>** and then **<** ▼ > so that the "Reconfigure unit" row is marked. Press **<OK>** to select this function.

The panel now asks the user to select the unit to be reconfigured. If required, press $<\nabla>$ to scroll to the relevant unit. If the relevant unit is already marked, press <**OK**> to continue.

The Start level / Stop level - the settings for which ratio the system is to start and stop the fan at. Once it has started, it works normally until the humidity indoors and outdoors is equal, which is reason that the Stop value is less than the Start value.

Fan type regulates what is connected and can be set for AC, EC fan and CR (control relay) which means that the fan is controlled via relay. Reconnection in the Control unit is also required when replacing the fan.

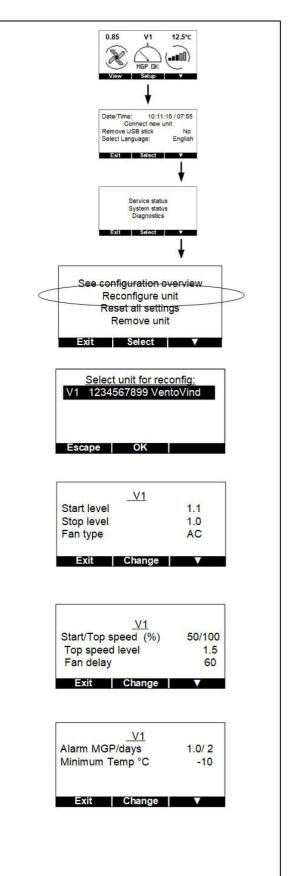
Start/Top speed controls at which speed the fan is to start respectively how fast it may run.

Top speed level controls at which ratio the fan is to reach its defined top speed.

Fan delay controls the motor damper delay that the fan is to start at. If the motor damper has not had time to open before the fan starts, there is a risk of damper noise.

Alarm MGP/days controls the level and the duration required for an alarm to be presented on the display. This is usually set to 1.0/5, which means that if the MGP level exceeds 1 for five days in a row, the alarm is triggered to notify the user of the situation.

Min Temp is the minimum permitted Outdoor temperature at which the system may work.





Backup Dehumidifier - Controls whether the system must use a backup dehumidifier.

Parallel operation controls whether the backup dehumidifier is to work in parallel with the VentoVind™ fan or not. Normally, Parallel operation must be set to No, which means that if the Backup dehumidifier starts the fan stops, usually the best and most energy efficient solution.

Modbus baud rate – For regulating the Baud rate speed via RS485. VentoVind™ is set to Baud rate 19200 at delivery.

Speed options: 1200, 2400, 4800, 9600, 14400, 19200, 38400, 56000, 57600, 115200. Only used when connecting to central monitoring and control system (Building Automation) RS485.

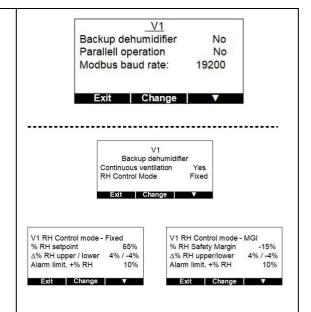
For backup dehumidifier settings see chapter: <u>Reconfigure unit (by regulation parameters), Crawl space</u>

NOTE!

When the user selects to change a parameter, a warning text always appears to prevent unintentional changes.

When the change has been made and saved, if everything is successful, a confirmation appears to store the changes in the Control unit. If the confirmation does not appear, repeat the procedure.

If in doubt whether the change was saved or not, use the function "See configuration overview" to check which settings are now applicable to the unit.





Resetting to factory default

In the status view, normal view, first press <Setup> and then < ▼ > twice to get to the Settings view.

In the settings view, press **<Select>** and then <▼> so that the "Reset all settings" row is marked. Press **<OK>** to select this function.

The panel now asks the user to select the unit to be reset. If required, press < ▼ > to scroll to the relevant unit. If the relevant unit is already marked, press <OK> to continue.

To prevent any unintentional changes, the user confirms the selection and intention once more. Press **<OK>** if everything is OK.

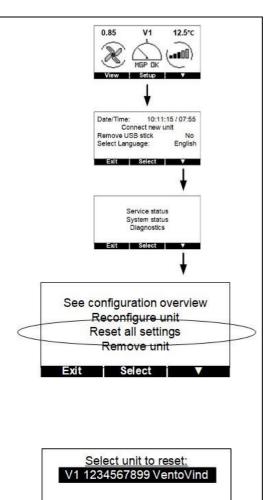
Factory configuration means:

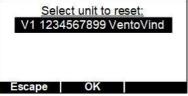
For dehumidifiers that the unit uses fixed regulation method with the setpoint 65% and hysteresis +/- 4%. The alarm level is set to +10%, which means that the alarm for high humidity is presented if the relative humidity in the space is 79%.

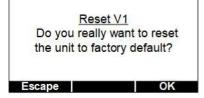
For VentoVind™

Start level 1.1

If in doubt whether the change was saved or not, use the function "See configuration overview" to check which settings are now applicable to the unit.









Remove unit

In status view, normal view, first press **<Setup>** and then **< ▼**> twice to get to the Settings view.

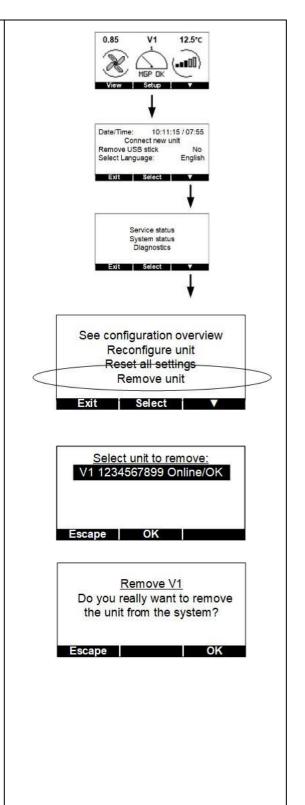
In the settings view, press **<Select>** and then <▼> so that the "Remove unit" row is marked. Press **<OK>** to select this function.

The panel now asks the user to select the unit to be reset. If required, press $< \nabla >$ to scroll to the relevant unit. If the relevant unit is already marked, press $< \mathbf{OK} >$ to continue.

To prevent any unintentional changes, the user confirms the selection and intention once more. Press **<OK>** if everything is OK.

The unit has now been removed from the system. Its data will no longer be presented on the control panel and nothing will be logged from it. Neither will any alarms be presented. The control module will however continue to control its dehumidifier in accordance with the settings it has, as long as it is not disconnected.

The unit name that the removed unit had, for example A1, is now available again. If this number is the lowest available number, this name will be assigned to the next unit that is connected. In the event of a hardware replacement, ensure the old unit is removed before connecting the new one. In this way the new unit gets the same name as its predecessor.

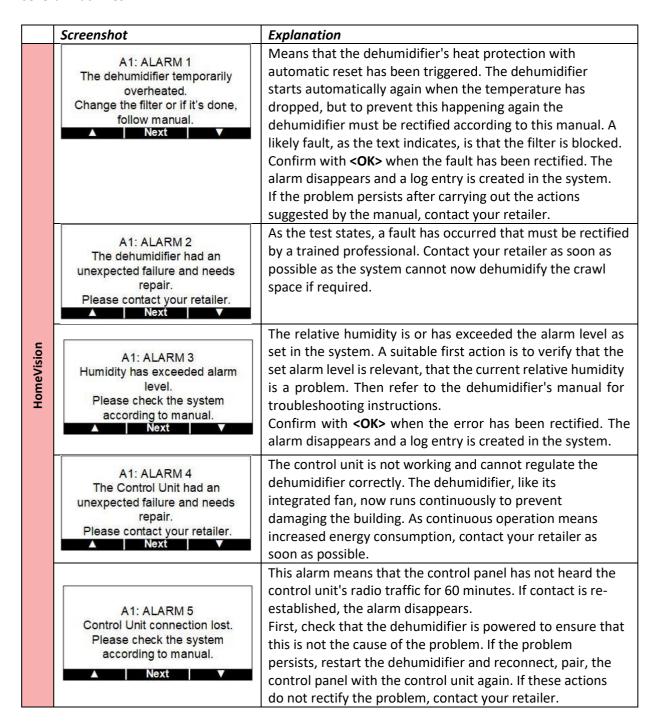




Alarms and service reminders

In HomeVision® Pro there are a number of alarms and reminders implemented to notify the user of malfunctions, errors or service requirement.

For all these presentations except the warning for failed log function, the <Next> button leads to a confirmation to actions taken pictured to the right below. When <OK> is pressed a log entry is created in the system so that the time is saved and can be used as support for service technicians for any later troubleshooting. A table with explanations of the different messages follows the images below. Note that where it is applicable, the top row of alarms starts with the machine designation it applies to, in the examples below A1, for the user to know which it applies to if the installation has several machines.





	V1: ALARM 6 The detected fan speed is below the alarm limit. Please check the system according to manual. V1: ALARM 7 The Control Unit registered MGP above alarm limit. Please check the system according to manual. Next	The alarm is triggered if the fan stops or rotates too slowly. This alarm only appears when the system is set to monitor the operation of an EC fan via tachometer signal, and is only possible to use together with EC fan. Check the set threshold value for the tacho alarm and fan function. This alarm means that the set MGP level has been exceeded over a continuous period. Standard setting for this alarm is MGP 1.0 and 5 days.
Vind™	V1: ALARM 8 One or more indoor sensors are failing but system is still operating.	This alarm means that the system no longer has contact with one or more indoor sensors. Use Diagnostics, See the Sensor values function in the menu to see the applicable sensors. Contact your retailer.
VentoVind™	V1: ALARM 9 One or more outdoor sensors are failing but system is still operating.	This alarm means that the system no longer has contact with one or more outdoor sensors. Use Diagnostics, See the Sensor values function in the menu to see the applicable sensors. Contact your retailer.
	V1: ALARM 10 All indoor and/or outdoor sensors are failing. Please check the system according to manual.	This alarm means that the system no longer has contact with one or more indoor or outdoor sensors. Use Diagnostics, See the Sensor values function in the menu to see the applicable sensors. Contact your retailer.
	V1: ALARM 11 Backup dehumidifier connection lost. Please check the system according to manual. Next	This alarm means that the connected backup dehumidifier is no longer in contact with the VentoVind system. As an initial measure, check whether the dehumidifier is still live, that its cable has not been unplugged or that a fuse has tripped. If problems persist, contact your dealer.
	V1: Time for service. Please follow instructions in manual. ▲ Next ▼	The system gives a service reminder, which occurs once a year. Refer to the dehumidifier's manual for instructions. When confirming via <ok></ok> the counter resets and the reminder does not appear for another year. A log entry is created in the system.
COMMON	No events are logged. USB stick is either full or malfunctioning. Press OK to eject USB stick.	This panel appears when there is a problem with the log. The problem may be due to a full or malfunctioning USB stick. Try with another FAT32 formatted USB stick. If that does not help, contact your retailer.
	PLEASE CONFIRM that corrective actions have been taken according to manual. Confirmation is logged. Exit OK	For all these presentations except the warning for failed log function, the <next> button leads to a confirmation to actions taken pictured to the right below. When <ok> is pressed a log entry is created in the system so that the time is saved and can be used as support for service technicians for any later troubleshooting.</ok></next>



Interpreting the USB log

With the HomeVision® Pro version, a CSV (comma separated) log file is created on the USB stick, the content of which can be read using Microsoft Excel for example.

Remember to specify in the menu system that the USB stick is to be removed, before physically removing it from the control panel. If this is not done there is a risk of interrupting writing to memory incorrectly and corrupting the file. Furthermore, you should create a copy of the log file and save it somewhere else and then use this copy for analysis. Failure to do this can result in mistakenly saving the file back on the USB stick in modified form, which can result in the control panel then continuing to log. As soon as the copy is made, reinsert the USB stick so as not to lose any data.

When the copy is opened, allow Excel to sort the data into columns to resemble the example below. The "Unit ID" column indicates the Control unit's serial number. For entries created when no control unit was connected, zero is given. "PARAMETER NR" indicates the relevant parameter's number, an indication which has no value to the user unless it is used for sorting data or for searches. "PARAMETER NAME" indicates the name of the relevant parameter and "PARAMETER VALUE" the relevant parameter's value at the time of the logging.

DATE/TIME	UNIT ID	PARAMETER NR	PARAMETER NAME	PARAMETER VALUE
2011-01-01 00:01	730	101	D RHlow	-4

The following presents the parameters that occur in the log.

PARAMETER NR	PARAMETER NAME	PARAMETER VALUE	EXPLANATION
101	D RHlow	-4	Hysteresis Lower
102	D RHHigh	4	Hysteresis Upper
103	Calc Low RH	61	Calculated deactivation level for the dehumidifier, Fixed regulation
104	Calc High RH	69	Calculated activation level for the dehumidifier, Fixed regulation
106	MGI safety margin	-15	Safety margin, Mould Index Regulation
109	RH nominal fixed	65	Setpoint value, Fixed regulation
110	RH alarm limit	10	Alarm limit
111	RH alarm level	79	Calculated alarm level, Fixed regulation
120	output FAN	1	Logged at automatic switching off and on of fan. 1 at start. 0 at stop.
121	output HEATER	1	Logged at automatic switching off and on of heater (dehumidifying). 1 at start. 0 at stop.
122	Alarm 1 overheated	1	Normally 1. 0 when the alarm occurs – shown on the panel.
123	Alarm 2 failure	1	Normally 1. 0 when the alarm occurs – shown on the panel.



			Normally 1. 0 when the alarm occurs – shown
124	Alarm 3 humidity	1	on the panel.
125	ContFan	1	During continuous fan operation 1 otherwise 0
126	FIX/MGI	0	0 for Fixed regulation. 1 for Mould Growth Index.
127	Months to service	13	Number of months to service. Starts at 13 and counts down.
128	Time changed	2011-05-03 15:33	Logged when time is changed.
130	CU ID	725	Logging of Control Unit's ID.
132	Pairing attempt std/serv	0	Logged when the system attempts to connect a new unit. 0 for Standard, 1 for Service.
133	Alarm Connection lost	1	Normally 1. 0 when the alarm occurs – shown on the panel.
134	Alarm USB writing error	1	Normally 1. 0 when the alarm occurs – shown on the panel.
135	Alarm 4 CU failure	1	Normally 1. 0 when the alarm occurs – shown on the panel.
142	Corrective action taken	1	Logged when an alarm or service message is acknowledged.
143	Lite/Pro	1	Logging of control panel version. O for Lite. 1 for Pro.
150	Active hrs this month	19	Logging of month's operating hours. Occurs the last day of each month.
165	Mean temp this month	14	Logging of month's average temperature. Occurs the last day of each month.
180	RH this month	45	Logging of the month's relative humidity (RH). Occurs the last day of each month.
192	Active hrs/day	2.7	Number of operating hours for the day
193	Mean temp/day	14	The day's average temperature
194	Mean RH/day	43	The day's average relative humidity (RF)

Maintenance and service

HomeVision® does not need any regular servicing or maintenance.

The control panel's ability to run on battery power is only intended for use during installation work and any service work in crawl spaces.

When this has been completed, HomeVision® must be powered by battery eliminator and it is recommended to remove the batteries because many types and brands have a tendency to leak as they age. This can, in turn, damage the electronics in HomeVision®.

If for any reason batteries must be replaced, use 1.5V AAA cells. Two batteries are needed.



Troubleshooting

Note: Service reminders and alarms presented on the display are described in previous chapters in this manual. Actions for these can be found in the dehumidifier's manual.

Fault symptom	Probable cause	Actions
The control	If batteries are used, these	Replace batteries
panel does not	have probably drained.	
work.		Check that it is in the electrical
Nothing appears		socket and that there is power.
on the display.		Check that the connector in the
		control panel is properly
		connected.
		If that does not help, try
		inserting batteries in the panel. If
		that works, the AC adapter is
		defective and needs replacing.
		If that does not work, the control
		panel does not work. Contact
		your retailer.
The control panel	Battery eliminator is not	
keeps restarting.	connected or not working.	
The control panel	The USB stick may be	Check that the USB stick, if
does not write	malfunctioning or, if previously	used outside the control panel,
anything to the log	used elsewhere, incorrectly	is FAT32 formatted.
	formatted.	If it still does not work, replace
		the USB stick with another,
		FAT32 formatted USB stick.
		If the problem persists,
		contact your retailer.
Connection failed	The control unit is not receptive to	The control unit is only open for
at pairing /	pairing.	pairing for 2 minutes after
new installation of	The radio signals cannot penetrate	current is connected. Restart
the control unit.	the house construction.	the control unit and try
	The distance between	connecting again.
	the Control panel and the control	Move the control panel closer to the control unit.
	unit is too great.	to the control unit.



Technical data

Control unit dehumidifying Crawl space	
Power supply via dehumidifier	24VDC
Safety class	IP 44
Length x width x height (mm)	180x110x63
Control unit VentoVind™	
Power supply	240VAC/50Hz
Safety class	IP 44
Length x width x height (mm)	255x180x95
Control panel	
Battery operation alternatively via battery eliminator	
Battery type	AAA cell, 1.5Volts
Battery eliminator: Connection, Primary voltage	240VAC/50Hz
Secondary voltage and max current	5VDC, 800mA
USB interface for memory stick	1GB memory stick supplied
Length x width x height (mm)	150x85x25
Radio frequency	868MHz



DO YOU HAVE QUESTIONS OR NEED HELP?

 ${\it Visit www.corroventa.com\ or\ call\ us\ to\ speak\ with\ an\ expert.}$ We have the knowledge and the equipment to find a solution as efficiently as possible.





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