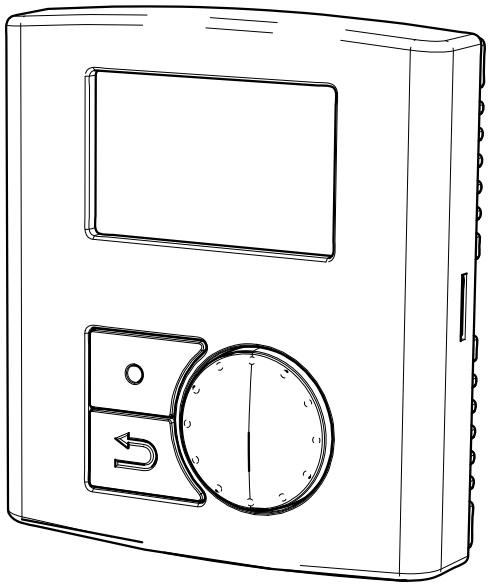
# CD Control panel



## GB Service Menu

D2074870-EN_GB
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# 1 Operation

## 1.1 Interface description

### 1.1.1 Control panel

Below illustration shows the control panel with a short description (figure 1).

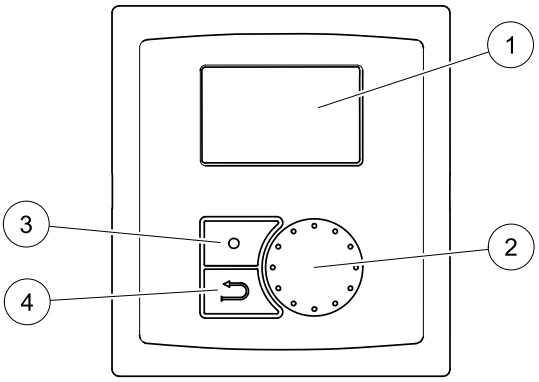
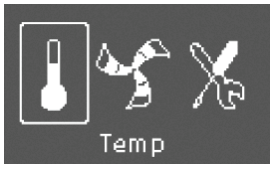



**Fig. 1 Control panel**

| Position | Description | Explanation |
|---|---|---|
| 1 | Display | Shows symbols, menus and settings. |
| 2 | Selection knob | Move through the menu lists or change settings and values by turning the knob left or right. |
| 3 | Confirm button | Confirm menu choices or settings by pressing the button. |
| 4 | Back button | Step back in the menu levels by pressing the button. |

# 2 Display symbols

| Symbol | Description | Explanation |
|---|---|---|
|  | Temp | Illustrates the current set temperature. The temperature setting is done in 5 steps (from completely empty to filled symbol) and can be changed manually by turning the “selection knob”.<br>Confirm the setting with the “confirm button” (chapter 3.1 and chapter 3.3). |
|  | Fan speed | Illustrates the current set fan speed.<br>The fan speed can be set manually in 3 steps (Low, Nom and High) by turning the selection knob and confirming with the confirm button after completed setting.<br>  <br>• Low ventilation (A): Can be used when leaving the building for a longer period.[1]<br>• Nominal ventilation (B): Will give required air change under normal conditions.<br>• High ventilation (C): To increase the airflow if necessary. |
|  | Service | Access the service menu by pressing the confirm button. |
|  | Alarm | Access the alarm list by pressing the confirm button. |

1. Can be set to OFF by activating “Manual fan stop”. See “Service menu overview” under “Functions”.

# 3 Service menu Overview

Enter the service menu by selecting the service symbol in the display.


Below overview displays the service menu structure in 3 levels.

| Menu level 1 | Menu level 2 | Menu level 3 | Explanation |
|---|---|---|---|
| **Service**<br>→Password | **Password**<br>Password XXXX<br>Locked YES/NO | | Enter the service level by typing 1111. Use the selection knob for each digit and confirm with the confirm button after each set digit. |
| **Service**<br>→Change password<br>Filter period<br>Time/Date | **Change password**<br>Actual XXXX<br>New XXXX<br>Confirm XXXX | | **Set** new password if necessary.<br>In case the new password would be forgotten or misplaced it's still possible to enter the service level by writing 8642. This overrides the earlier set password. |
| **Service**<br>Change password<br>→Filter period<br>Time/Date | **Filter period**<br>Reset: NO<br>Time to replace 9 month | | **Shows** selected time interval between filter change.<br>**Set** Reset of the filter period to YES after completed filter change.<br>**Set** time between filter changes. |
| **Service**<br>Change password<br>Filter period<br>→Time/Date | **Time/Date** YY/MM/DD<br>Date: 10/05/08<br>Time: 10:00<br>Weekday: SAT | | **Shows** current set date and time.<br>**Set** Correct date and time. |
| **Service**<br>→Ext/Forc Run<br>Week program<br>Fan speed log | **Ext/Forc Run**<br>Minutes: 0<br>Fan speed: Nominal | | Use this dialogue frame to program extended time you want the unit to work under operation conditions other than determined by the week schedule.<br>**Shows** set time for extended/forced running.<br>**Shows** Set fan speed.<br>**Set** the time in minutes the unit is to run in extended/forced running mode.<br>**Set** the fan speed for this mode. Choose between Low, Nom or High. Default is Nom. |
| **Service**<br>Ext/Forc Run<br>→Week program<br>Fan speed log | **Week program**<br>Week program<br>Fan speed | **Week program**<br>Day MON<br>Per1: 07:00 16:00<br>Per2: 00:00 00:00 | Program how you want the unit to operate according to the week schedule. It's possible to set 2 periods per day.<br>**Set** week day and time interval for the time you want the unit to be in ON mode. |
| | | **Fan speed**<br>ON level: Low/Nom/High<br>OFF level: OFF/Low/Nom/High | Use this dialogue frame to determine the ON and OFF speed for the fans in the week schedule.<br>**Set** ON level.<br>Choose between Low, Nom or High. Default is Nom<br>**Set** OFF level.<br>Choose between OFF, Low, Nom or High. Default is Low. |

| Menu level 1 | Menu level 2 | Menu level 3 | Explanation |
|---|---|---|---|
| **Service**<br>Ext/Forc Run<br>Week program<br>→Fan speed log | **Fan speed log**<br>Level: 1–5 Reset: No/Yes<br>SF: 140 / 140<br>EF: 140 / 140 | | Use this dialogue frame to see how the fans have operated during the time (h) they have been active.<br>The speeds are shown in 5 different levels:<br>• Level 1: 0%<br>• Level 2: 1–29%<br>• Level 3: 30–44%<br>• Level 4: 45–59%<br>• Level 5: 60–100%<br>Choose between the levels to see the time in hours the fans have been active in the different levels.<br>`Reset Yes` resets the SF and EF time in the left column for all levels. The right column continues to count ahead and can not be reset.<br>**Note:**<br>`Factory reset` (see `Functions/Factory reset`) will not affect this function. |
| **Service**<br>Week program<br>Fan speed log<br>→Functions | **Functions**<br>→Heater/Cooler<br>Frost protection<br>Air flow | **Heater/Cooler**<br>Heater: None/Electrical/ Water<br>Cooler: None/Water | Use this dialogue frame to set up the unit for heating and/or cooling.<br>**Set** `Heater` to `None`, `Electrical` or `Water`.<br>**Set** `Cooler` to `None` or `Water`. |
| | **Functions**<br>Heater/Cooler<br>→Frost protection<br>Air flow | **Frost protection**<br>Alarm limit 11°C | **Shows** current set frost protection alarm limit in °C for the installed water coil.<br>**Set** `alarm limit` in °C. Default is 7°C. |
| **Service**<br>Ext/Forc Run<br>Week program<br>→Functions | **Functions**<br>→Air flow<br>Air flow unit<br>Manual fan stop | **Airflow EF SF**<br>Nom 50 50<br>Max 107 107<br>Low 30 30 | Use this dialogue frame to set the fan speed. The speed can be set individually for each fan (`EF`: Exhaust fan, `SF`: Supply fan). Max. diff 20%, can be EF and SF.<br>**Set** the fan speed for `EF` and `SF` for each step (`Low`, `Nom`, and `High`).<br>**Note:**<br>The values for Nom, Max and Low suggested in this overview are example settings. |
| | **Functions**<br>Air flow<br>→Air flow unit<br>Manual fan stop | **Air flow unit**<br>% l/s $m^3/h$ | VR units l/s default<br>VC units % only |
| | **Functions**<br>Air flow<br>Air flow unit<br>→Manual fan stop | **Manual fan stop**<br>Allow manual fan stop Y/N | **Set** if it should be possible to turn off the fans in the unit manually from the control panel.<br>Chose between `Y` and `N`.<br>If `Y` is selected the fans can be turned off by turning the selection knob to empty fan symbol |

| Menu level 1 | Menu level 2 | Menu level 3 | Explanation |
|---|---|---|---|
| | **Functions**<br>→Analog input<br>Analog output<br>Digital input | **Analog input**<br>1: SS 20.0<br>2: ETS 20.0<br>3: Not used<br>3: EHS 20.0<br>4: OT/FPS 20.0<br>5: OS 10.5 | **Shows** analogue inputs from active temperature sensors.<br>SS: Supply air temp sensor.<br>ETS: Extract air temp sensor.<br>Not used (VC units)<br>EHS: Exhaust air temp sensor (VR units)<br>OT/FPS: Over heat protection sensor/Frost protection sensor.<br>OS: Outdoor air temp sensor. |
| | **Functions**<br>Analog input<br>→Analog output<br>Digital input | **Analog output**<br>AO1 auto/man/off 0.0V<br>AO2 auto/man/off 7.3V<br>AO3 auto/man 10V | **Shows** current analogue outputs in 0–10 V to hot/cold water actuator and bypass damper.<br>**Set** AO1(Analogue output to hot water actuator) to auto, man or off. Default is off.<br>AO2 (Analogue output to cold water actuator) to auto, man or off. Default is off.<br>AO3 (Analogue output to bypass damper) to auto or man. Default is auto. (VC units)<br>Selecting man enables the user to manually control the actuator/damper with a 0–10 V signal. 0V means completely closed and 10 V completely opened actuator/bypass damper. When used on the bypass damper the unit can be forced to go to summer operation or forced defrosting (10 V). |
| | **Functions**<br>→Digital input<br>Config DI 1–3<br>Config DI 4–7 | **Digital input**<br>DI1 ON/OFF<br>DI2 ON/OFF<br>DI3 ON/OFF<br>DI4 ON/OFF<br>DI5 ON/OFF<br>DI6 ON/OFF<br>DI7 ON/OFF | **Shows** current setting of the digital inputs ON or OFF<br>DI1: Fan configuration<br>DI2: Fan configuration<br>DI3: Fan configuration<br>DI4: Heater stopped<br>DI5: Extended/forced running<br>DI6: Damper test<br>DI7: Home/leave |
| | **Functions**<br>Digital input<br>→Config DI 1–3<br>Config DI 4–7 | **Config DI 1–3**<br>1 SF high EF nom<br>2 SF off EF low<br>3 SF high EF high | Use this dialogue frame to set how you want the fans to react to 3 different digital inputs when they are switched on or off (the settings in the column to the left are examples).<br>On/off switches need to be connected physically to terminals on the main print card to obtain the different functions. See the wiring diagram for more information.<br>**Set** the supply air fan (SF) and extract air fan (EF) to off, low, nom or High for digital inputs 1–3 |

| Menu level 1 | Menu level 2 | Menu level 3 | Explanation |
|---|---|---|---|
| | **Functions**<br>Digital input<br>Config DI 1-3<br>→Config DI 4-7 | **DI 4–7**<br>DI4: Stop heat<br>DI5: Ext run<br>DI6: Damper test<br>DI7: Home/leave | DI 4–7 are default set from factory and can't be changed by the user. Below follows a short description of each function.<br>DI4: Makes it possible to turn the electrical re-heater battery on or off.<br>DI5: Turn the Extended/forced running function on or off by the help of a switch. The function overrides current set fan speed.<br>DI6: Automatic test of the bypass damper function. This digital input is not available for the user. (VC units).<br>DI7: Switching on this input decreases the supply air temp set point with 10K . This function is used when the building is uninhabited for a longer period.<br>**Note:**<br>The "Home/leave" function is not working if Water heater is activated. |
| | **Functions**<br>→Digital output<br>Defrosting<br>Modbus | **Digital output**<br>1: SF 67%<br>2: EF 67%<br>3: Rotor motor<br>4: Alarm Y/N<br>5: Dmp OFF<br>6: Reheater Y/N | **Shows** The current settings of digital outputs 1–5 (the settings in the column to the left are examples).<br>1: SF 67%: Current set speed of the supply air fan (shown as percentage of the maximum speed).<br>2: EF 67% Current set speed of the extract air fan (shown as percentage of the maximum speed).<br>3: Rotor ON/OFF: Indicated if the rotor is active or not (VR units).<br>3: Not used (VC units)<br>4: Alarm Y/N: Indicates if the sum. alarm is active or not<br>5: Dmp OFF: Outdoor/exhaust air damper is on or off (230 V signal relay).<br>6: Reheater Y/N: Indicates if the electrical re-heater is active or not. |
| | **Functions**<br>Digital output<br>→Defrosting<br>Modbus | **Defrosting**<br>Mode 0-5 | Use this dialogue frame to set how aggressive you want the defrosting function to operate.<br>**Set** VR units, defrosting mode between 0–5, VC units between 1–5. For VR default is 0, default for VC is 3. |
| | | Allow unbalance Yes/No<br>Reduced flow Active<br>Bypass defrosting Active<br>Stop defrosting Active | Only for VC units.<br>**Set** If you during the defrosting cycle can accept a temporary unbalance of the air flow from the unit, i.e. supply air decreases. Select YES or NO.<br>**Shows** if any defrosting cycle is active. |
| | **Functions**<br>Defrosting<br>→Modbus<br>Factory reset | **Modbus**<br>Address: 1-247<br>Baud: 9600/19200<br>Parity: None/Even/Odd | Information about Modbus communication and variables can be found in the Modbus user manual for residential units in the online catalogue at www.systemair.com. |

| Menu level 1 | Menu level 2 | Menu level 3 | Explanation |
|---|---|---|---|
| | **Functions**<br>Defrosting<br>Modbus<br>→Factory reset | **Factory reset**<br>Really reset?<br>Yes/No | Use this dialogue frame to return to factory settings.<br>**Set** YES or NO<br>**Note:**<br>This will erase all your personal settings that have been done for the unit. |
| **Service**<br>→Language<br>Versions<br>Alarms | **Languages**<br>Language ENGLISH | | Use this dialogue frame to select your local language.<br>**Set** Language by turning the selection knob. |
| **Service**<br>Languages<br>→Versions<br>Alarms | Version VC300<br>CD EC<br>Appl. 1.08.00<br>1.22.00<br>Boot 1.00.01<br>1.01.00 | | **Shows** current software version and unit. |
| **Service**<br>Languages<br>Versions<br>→Alarms | **Alarms**<br>Fan Y<br>EmT/Frost N<br>Damp/Rot N<br>Pb Fail N<br>Temp N<br>Filter Y | | **Shows** the alarm list and which alarms have been triggered (indicated by Y). See alarm list. |

# 3.1 Setting Temperature

The supply air temperature is set manually in 5 steps in the main menu display by choosing the temperature symbol (figure 2).

If an electrical or water re-heater is installed the temperature steps are 12.0, 14.5, 17.0, 19.5 and 22.0 °C. Default is 12.0 °C.

If the unit is used without any re-heater installed or if the re-heater is deactivated, the temperature steps are 15.0, 16.0, 17.0, 18.0 or 19.0 °C . Default is 15.0 °C.

Each temperature step is illustrated by increasing the filling of the temperature symbol.

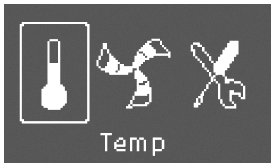



**Fig. 2 Temperature symbol**

# 3.2 Manual Setting of Fan speed

It's possible at any time to manually set the fan speed in the main menu display. By choosing the fan symbol and confirming (figure 3) it's possible to increase or decrease the fan speed in the 3 steps, Low, Nom and High. By doing so you override the programmed week schedule for the unit until the end of

the present time period in the week program. Can be set to OFF by activating “Manual fan stop”. See “Service menu overview” under “Functions”.

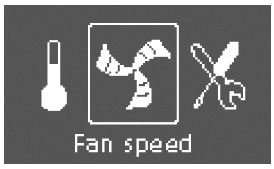



**Fig. 3 Fan speed symbol**

# 3.3 Manual Summer mode

Manual summer mode occurs if one step lower than 12 °C is selected. The temperature symbol on the main menu is then completely empty (figure 4). For VC units this means that the bypass damper opens (10 V control signal to output DAMPER), for VR units the rotor stops. If the re-heater is active, it will switch off during manual summer mode. Manual summer mode aborts automatically after two minutes if the supply air temperature is ≤ 5 °C.

If water heater battery is installed and activated the manual summer mode is aborted if the outdoor air or supply air temperature is ≤ 5 °C.

**Fig. 4 Symbol for manual summer mode**

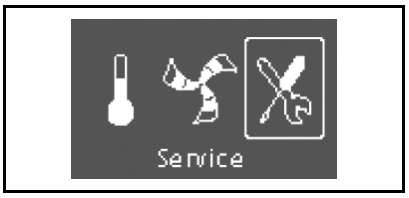
# 3.4 Cool recovery

Cool recovery occurs when there is a cooling need and the outdoor air temperature is higher than the extract air temperature.

# 3.5 Software configuration for electrical heater

**1**

Go to the service menu by using the selection knob.

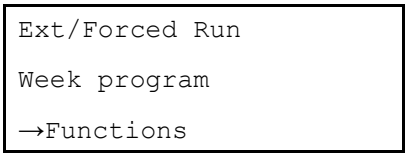



**2**

Enter the service level by typing the password. Use the selection knob for each digit and confirm with the confirm button after each set digit.

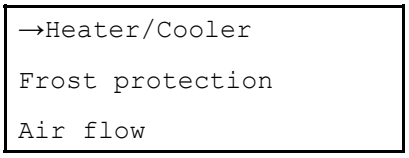

**3**

Go to `Functions`.



**4**

Choose `Heater/Cooler`.




**5**

Select `Heater:  Electrical`.


The unit is now ready to be used with the installed electrical heater.

Systemair AB
Industrivägen 3
SE-739 30 Skinnskatteberg, Sweden

Phone +46 222 440 00

Fax +46 222 440 99

www.systemair.com

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