

CTR 07

Microprocessor control

User's Manual

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Contents

Introduction

This **Control Panel** is designed to control machines used to change the air in the simplest way possible.

The user activates the air change functions by means of a knob and looking at the graphic display that shows the pertinent windows.

Rotating the knob makes it possible to change the values and scroll the menu items, while pressing it confirms the changes or selections made.

The icon for closing the window is always displayed at the top right of the screen. To move to the next window, rotate the knob until this icon is reached, and then press the knob.

The operating status of the entire air change plant is summarised in the window that is normally displayed, and the user has a choice of a simplified version or a complete overview of the machine.

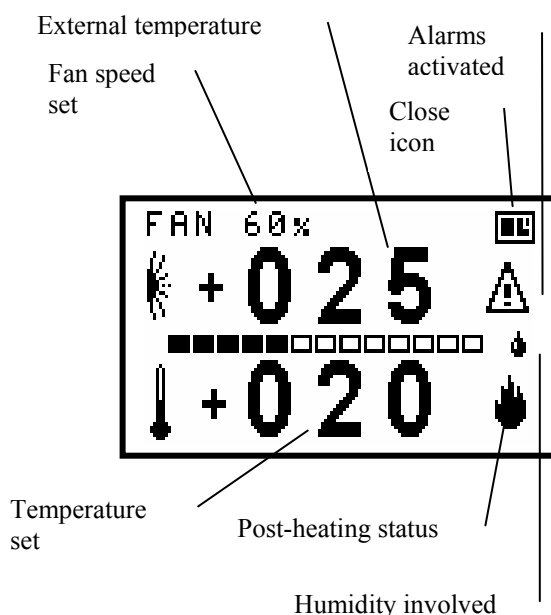
Simplified display

The simplified display provides a basic representation of the machine's status, indicated by means of large symbols and characters that are even visible from a distance.

Only if several machines are installed: the status of the first machine only is displayed but an alarm indication will appear when any of the machines is in alarm.

The user can access the simplified window at any time and from any window by simply holding the knob pushed down for 5 seconds. Alternatively, it can be accessed by selecting the **Simplified** item in the selection menu.

Simplified Window



Changing the speed on the fans

- Rotate the knob clockwise to increase the speed and anticlockwise to reduce it.

When **Chrono** is selected, the speed is automatically selected according to the weekly programme, whereas when **Auto** is selected the speed is selected automatically, depending on the quality of the air extractor and the comfort profile configuration.

Changing the temperature setting

- Press the knob – the temperature set starts to flash.
- Rotate the knob to change the temperature setting.
- Press the knob to stop the changing mode and the temperature setting stops flashing.

When **Off** is set, post-heating is kept switched off.

Alarms Activated

When alarms are activated an icon is displayed along with flashing wording. The wording may indicate dirty filters or suggest calling for assistance with more serious problems.

Switching to the Synoptic Window

- To pass to the synoptic window, hold the knob down for 5 seconds.

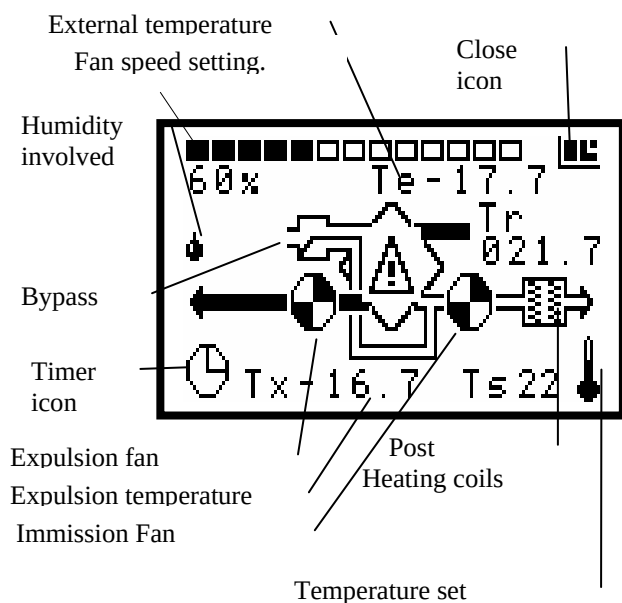
Synoptic Display

The synoptic display provides a detailed graphic representation of the machine's status and from here all the available functions can be activated.

To pass from the simplified window to the synoptic window, hold the knob down for 5 seconds. To access the synoptic window from any other window, close all the windows.

Only if several machines are installed: the status of the first machine only is displayed but an alarm indication will appear when any of the machines is in alarm.

Synoptic Window



Changing the speed on the fans

- Rotate the knob until the current speed is selected, which is shown in light wording on a dark background.
- Press the knob and the current speed flashes.
- Rotate the knob to change the speed.
- Press the knob to confirm the change made, and the speed is shown in light wording on a dark background.

When **chrono** is selected, the speed is automatically selected according to the weekly programme, whereas when **auto** is selected the speed is selected automatically, depending on the quality of the air extractor and the comfort profile configuration.

Timer / Booster function

- Rotate the knob until the Timer icon is selected, which will appear on a dark background.
- Press the knob and the timer setting will flash.
- Rotate the knob if you want to set a value that differs by 5 minutes.
- Press the knob to confirm the configuration set. The timer starts to count down and the fans will run at 100% speed until the time expires.

Changing the temperature setting

- Rotate the knob until the Temperature icon is selected, which will appear on a dark background.
- Press the knob – the temperature set starts to flash.
- Rotate the knob to change the temperature setting.
- Press the knob to confirm the change made. The set temperature stops flashing.

When **off** is set, post-heating is kept switched off.

Alarms Activated

When alarms are activated an icon is displayed along with flashing wording. The wording may indicate dirty filters or suggest calling for assistance with more serious problems.

Change Window

Use the Close icon to access the other windows.

- Rotate the knob until the icon is selected, which will appear on a dark background.
- Press the knob to confirm the selection made - this will take you to the menu window.

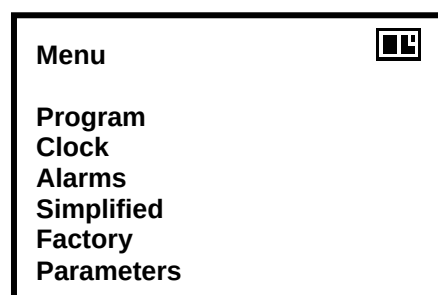
Selection Menu

To access detailed system information, select the items in the menu.

From the synoptic window, use the close icon to access the menu window.

- Rotate the knob until the icon is selected, which will appear on a dark background.
- Press the knob to confirm the selection made - this will take you to the menu window.

Menu



Selecting an item in the menu

- Rotate the knob until the required item is selected, which is shown in light wording on a dark background.
- Press the knob to confirm the selection made – the corresponding new window opens.

Go back to the Synoptic Window

To access the synoptic window, use the close icon.

- Rotate the knob until the icon is selected, which will appear on a dark background.
- Press the knob to confirm the selection made – the synoptic window opens.

Operating status

How to select the unit (only required if several machines are installed)

- turn the knob to select the unit the status of which you want to check: the name of the unit will appear in light coloured letters on a dark background
- press the knob to confirm the selection: the corresponding status window will appear

Menu / State

State	
Te(exter.)	-16.7
Tr(return)	-21.7
Tx(expel.)	-17.7
Fan(supply)	On
Fan(exhau.)	On
Humidity	No

Te (exter.)

External temperature

Tr (return)

Recirculated air temperature

Tx (expelled)

Expelled air temperature

Fan (supply)

Intake fan state

Fan (exhau.)

Exhaust fan state

Humidity

Humidity is present

Bypass

Bypass working

Heat 1

The first post-heating stage is working

Heat 2

The second post-heating stage is working

CO2 VOC ppm

Amount of air (values less than 700 ppm indicated clean air, while values close to 2000 ppm indicate very dirty air).

Back to main window

The main window is accessed by means of the close icon:

- turn the knob to select the icon: this will appear in light letters on a dark background
- press the knob to confirm the selection: the menu window will appear

Preset Program

The preset program is as follows:

Fan speed low is to be taken as switched off.

Fan speed medium or high is to be taken as being selected according to the quality of the air and the comfort profile chosen.

Working days (Monday to Friday):

From 00:00 to 06:30

Medium fan speed – post-heating off

From 06:30 to 08:00

Medium fan speed – post-heating on

From 08:00 to 11:30

Low fan speed – post-heating on

From 11:30 to 13:00

High fan speed – post-heating on

From 13:00 to 18:00

Low fan speed – post-heating on

From 18:00 to 22:00

High fan speed – post-heating on

From 22:00 to 24:00

Medium fan speed – post-heating off

Non-working days (Saturday and Sunday):

From 00:00 to 06:30

Medium fan speed – post-heating off

From 06:30 to 08:00

Medium fan speed – post-heating on

From 08:00 to 11:30

Medium fan speed – post-heating on

From 11:30 to 13:00

High fan speed – post-heating on

From 13:00 to 18:00

Medium fan speed – post-heating on

From 18:00 to 22:00

High fan speed – post-heating on

From 22:00 to 24:00

Medium fan speed – post-heating off

Editing the preset program

Select the **Program** item from the selection menu to access the program window, from where the user can edit the preset weekly programme.

Menu / Program

Program	
Time table	
Low speed	off
Medium speed	040%
High speed	065%

Speed Settings

The program provides three speed settings: low, medium, and high speed. The user uses the program to set the times at which the speed changes from one setting to another – see Menu / Program / Timetable

In the example the low speed is to be taken as the fans being off, medium as the fans at 40% and high, as the fans at 65%.

Selecting timetables

- Rotate the knob until **timetable** is selected, which is shown in light wording on a dark background.
- Press the knob to confirm the selection made – the timetable window opens.

Configuring a set speed

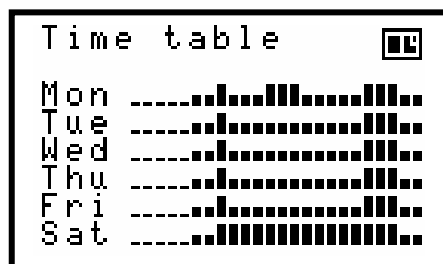
- Rotate the knob until the required speed is selected, which is shown in light wording on a dark background.
- Press the knob and the current value flashes.
- Rotate the knob to set the required speed.
- Press the knob to confirm the setting made, and the speed is shown in light wording on a dark background.

Go back to the Menu Window

To access the menu window, use the close icon.

- Rotate the knob until the icon is selected, which will appear on a dark background.
- Press the knob to confirm the selection made – the menu window opens.

Menu / Program / Timetable



Graphic Representation

The programmes for all seven days of the week are represented graphically. Each bar represents a time of the day, and the height of the bar indicates the three speeds.

Selecting the daily programme

- Rotate the knob until the required day is selected, which is shown in light wording on a dark background.
- Press the knob to confirm the selection made – the corresponding day changes window opens.

Go back to the Program Window

To access the Program window, use the close icon.

- Rotate the knob until the icon is selected, which will appear on a dark background.
- Press the knob to confirm the selection made – the program window opens.

Menu / Program / Timetable / Day Changes

Monday				
C 1	00 . 00	low	off	
C 2	05 . 00	med	on	
C 3	07 . 00	high	on	
C 4	08 . 00	med	on	
C 5	11 . 00	high	on	
C 6	14 . 00	med	on	

Changes

The user programs the changes in speed and post-heating at preset times. The first three letters after the time indicate the speed, while on/off indicates the post-heating status.

Configuring a change

- Rotate the knob until the required change is selected, which is shown in light wording on a dark background.
- Press the knob to confirm the selection made – the corresponding change window opens.

Copying changes from another day

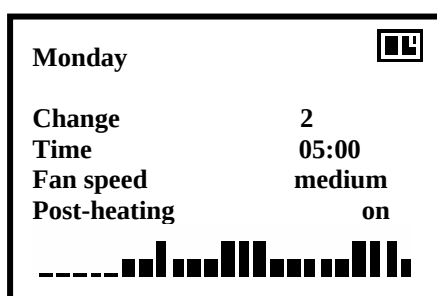
- Rotate the knob until the **Copy Day** item is selected, which is shown in light wording on a dark background.
- Press the knob to confirm the selection made – the corresponding copy day window opens.

Go back to the Timetable Window

To access the timetable window, use the close icon.

- Rotate the knob until the icon is selected, which will appear on a dark background.
- Press the knob to confirm the selection made – the timetable window opens.

Menu / Program / Timetable / Day Changes / Change



Selecting a change

- Rotate the knob until the required **Change** item is selected, which is shown in light wording on a dark background.
- Press the knob and the change selected flashes.
- Rotate the knob to select a new change.
- Press the knob to confirm the change made, and the change is shown in light wording on a dark background.

Configuring the time

- Rotate the knob until the **Time** item is selected, which is shown in light wording on a dark background.
- Press the knob and the time setting flashes.
- Rotate the knob to set the required time.
- Press the knob to confirm the setting made, and the time is shown in light wording on a dark background.

Selecting the speed on the fans

- Rotate the knob until the **Fan Speed** item is selected, which is shown in light wording on a dark background.
- Press the knob and the current speed setting flashes.
- Rotate the knob to select the new speed setting among the three possibilities (low, medium, and high).
- Press the knob to confirm the setting made, and the speed setting is shown in light wording on a dark background.

Enabling post-heating

- Rotate the knob until the **Post-Heating** item is selected, which is shown in light wording on a dark background.
- Press the knob and the current enabling flashes.
- Rotate the knob to enable or disable post-heating.
- Press the knob to confirm the enabling, and this is shown in light wording on a dark background.

Post-heating is always disabled when the fans are switched off.

Graphic representation of the program

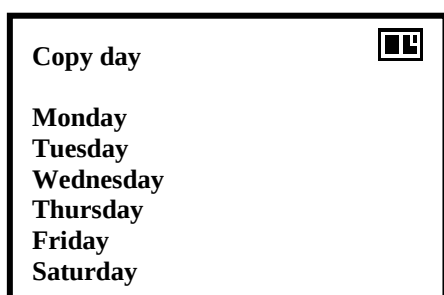
The graphic representation of the daily program selected is updated each time changes are made.

Go back to the Day Change Window

To access the day change window, use the close icon.

- Rotate the knob until the icon is selected, which will appear on a dark background.
- Press the knob to confirm the selection made – the day changes window opens.

Menu / Program / Timetable / Day Changes / Copy Day



Selecting changes to be copied

- Rotate the knob until the day that has the changes to copy is selected, which is shown in light wording on a dark background.
- Press the knob to confirm the selection made – the updated day changes window is displayed.

Go back to the Day Change Window

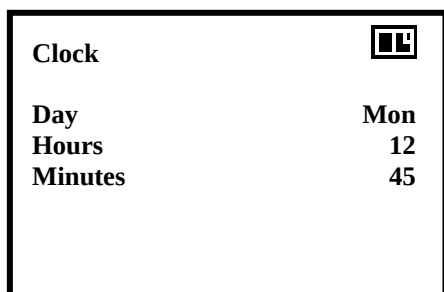
To access the day change window, use the close icon.

- Rotate the knob until the icon is selected, which will appear on a dark background.
- Press the knob to confirm the selection made – the day changes window opens.

Configuring the Clock

Select the **Clock** item from the menu to access the clock window.

Menu / Clock



Configuring the day

- Rotate the knob until the **Day** item is selected, which is shown in light wording on a dark background.
- Press the knob and the current configured day flashes.
- Rotate the knob to configure the required day.
- Press the knob to confirm the configuration, and the day is shown in light wording on a dark background.

Configuring the time

- Rotate the knob until the **Hours** item is selected, which is shown in light wording on a dark background.
- Press the knob and the current time setting flashes.
- Rotate the knob to set the required time.
- Press the knob to confirm the setting made, and the time is shown in light wording on a dark background.

Configuration of minutes

- Rotate the knob until the **Minute** item is selected, which is shown in light wording on a dark background.
- Press the knob and the minutes begin to flash.
- Rotate the knob to configure the required minutes.
- Press the knob to confirm the configuration, and the minutes setting is shown in light wording on a dark background.

Go back to the Menu Window

To access the menu window, use the close icon.

- Rotate the knob until the icon is selected, which will appear on a dark background.
- Press the knob to confirm the selection made – the menu window opens.

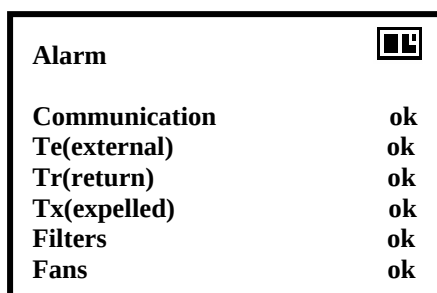
Alarms

When alarms are activated, more detail can be obtained on the cause of the fault by opening the dedicated window. The alarm window is accessed by selecting the **Alarm** item in the selection menu.

How to select the unit (only required if several machines are installed)

- turn the knob to select the unit the status of which you want to check: the name of the unit will appear in light coloured letters on a dark background
- press the knob to confirm the selection: the corresponding status window will appear

Menu / Alarm



Communication

OK indicates that communication between the board on the machine and the control panel is working properly. KO indicates that there is a communication fault.

Te (external)

OK indicates that the temperature sensor for the external air is working properly. KO indicates that the sensor is faulty.

Tr (return)

OK indicates that the temperature sensor for the return air is working properly. KO indicates that the sensor is faulty.

Tx (expelled)

OK indicates that the temperature sensor for the expelled air is working properly. KO indicates that the sensor is faulty.

Filters

OK indicates efficient filters. KO indicates dirty filters.

Fans

OK indicates that the fans are working properly. KO indicates that the fans are faulty.

Go back to the Menu Window

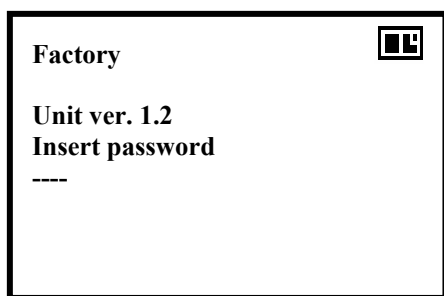
To access the menu window, use the close icon.

- Rotate the knob until the icon is selected, which will appear on a dark background.
- Press the knob to confirm the selection made – the menu window opens.

Factory Configuration

Expert technical personnel can effect detailed configuration of the functions using the control panel, by accessing the **Factory** window from the selection menu. This access is password protected.

Menu / Factory



Go back to the Menu Window

To access the menu window, use the close icon.

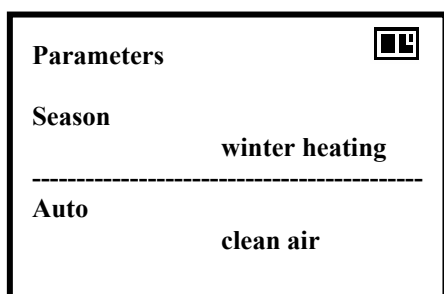
- Rotate the knob until the icon is selected, which will appear on a dark background.
- Press the knob to confirm the selection made – the menu window opens.

User Parameters

The user can configure the air changes in order to obtain the best compromise between maximum performance and satisfactory comfort.

The parameters window is accessed via the selection menu.

Menu / Parameters



Selecting the Season

Selecting the correct season makes it possible to make optimum use of the heat exchanger, while forgetting to update the season leads to incorrect functioning of the air change process. If correct updating of this parameter cannot be

guaranteed, it is preferable to select **Not defined** for the season.

- Rotate the knob until the current season setting is selected, which is shown in light wording on a dark background.
- Press the knob and the current season setting flashes.
- Rotate the knob to select a new season.
- Press the knob to confirm the selection made, and the season is shown in light wording on a dark background.

Configuring automatic regulation of the fan speeds

Four comfort profiles are available: **clean air**, **clean air +**, **clean air ++** and **super clean air**. The first uses less energy, while the last provides maximum comfort.

- Rotate the knob until the set profile is selected, which is shown in light wording on a dark background.
- Press the knob and the current configured profile flashes.
- Rotate the knob to change the profile.
- Press the knob to confirm the configuration, and the profile required is shown in light wording on a dark background.

Go back to the Menu Window

To access the menu window, use the close icon.

- Rotate the knob until the icon is selected, which will appear on a dark background.
- Press the knob to confirm the selection made – the menu window opens.

Installation

Installation is to be done by specialist personnel.

Location

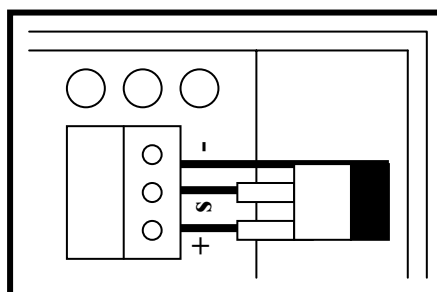
For optimum performance the unit must be fixed to an inside wall about 1,5 m above floor level, away from heat sources (such as heaters, cooker tops, etc.) and where it is not exposed to direct sunlight. It must not be installed near doors, where it can be struck by them, which will ruin the electronics.

Wiring

Connect the power supply to the + and – terminals, respecting the correct polarity.

Connect the BUS to the terminal marked s.

Connect using a screened 2 x 0,35 mm² cable via G-S-24V internal terminals, with a maximum length of 100m.



Characteristics

Power Supply: 9 / 30 Vdc 250mW

Maximum working temperature: 0 / 50 °C

Maximum storage temperature: -20 / 70 °C

Guarantee Conditions

The 2 year (24 month) guarantee period starts from when the equipment is received. The date of receipt must be checked in the purchase invoice.

For the guarantee period, the manufacturer will repair any defects resulting from fabrication errors or material faults free of charge. At their discretion they may replace the defective parts or the entire apparatus. Any other call for works under guarantee is excluded. The manufacturer also does not accept any responsibility for damages caused.

The material deemed to be faulty must be returned to the manufacturer via the dealer, along with a detailed description of the defect, provided by the dealer.

The cost of delivery of the goods is for the client's account. The return of the repaired goods shall be for the manufacturer's account.

Under no circumstances will the manufacturer react for defects caused by improper use that does not conform to the user manual supplied, or by natural events such as lightning, earth tremors, fire, etc.

They also do not accept any responsibility for repairs or modifications made to the equipment by personnel that do not work for the manufacturer.