

CORRIGO E-Tool

User Manual



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User manual CORRIGO E Tool

Revision B Oct 2004

This user manual covers the CORRIGO E Tool for both heating and ventilation

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® CORRIGO

™ E Tool

2. About this manual

This manual is designed to be an aid during installation and use of Corrigo E Tool. It describes all the functions unique to the program. The Corrigo E control parameters however are not described here. For detailed information on these, please see the manual for the controller in question.

Installation

Requirements

To install and run Corrigo E Tool you need a PC running Windows 2000 or Windows XP.

To communicate with a Corrigo you need a special communications cable, E-Cable.

Corrigo E Tool is delivered as a self-installing program.

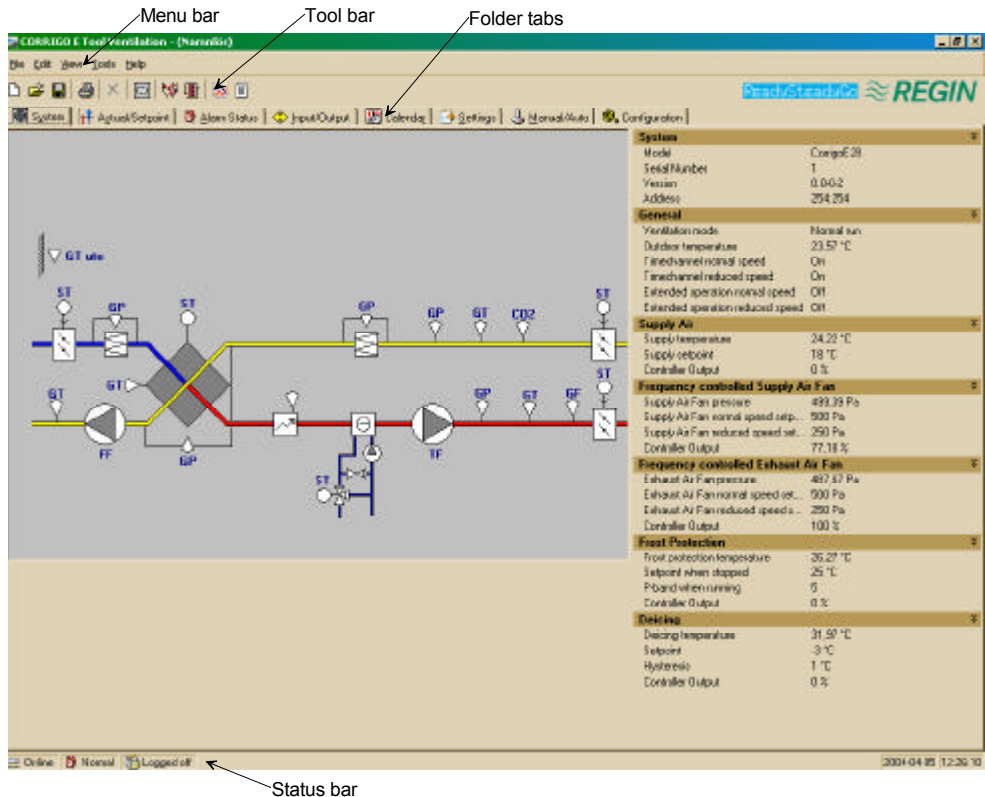
Load the CD and follow the on-screen instructions.

If your PC lacks a CD player, call your Regin supplier for alternative installation suggestions.

1. About CORRIGO E Tool

CORRIGO E Tool Heating and Corrigo E Tool Ventilation are Windows based PC- programs for the configuration and maintenance of the various Corrigo E series controllers.

CORRIGO E Tool has not been designed with the intention of being a full SCADA program.



The display window is divided into several parts:

At the top there is a menu bar with standard Windows type drop-down menus

Below the menu bar there is a Toolbar which gives direct access to various functions. All the functions in the toolbar are also accessible through the menu bar system.

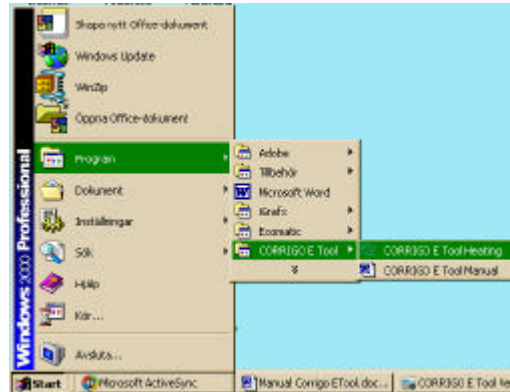
Below the toolbar there is a row of folder tabs giving access to a number of folders that can be shown, one at a time in the area below the tabs.

At the bottom of the window is the Status bar

This manual will mainly describe the functions of the items in the menu bar and the tool bar. These functions are the same for both CORRIGO E Tool Heating and CORRIGO E Tool Ventilation.

Since the contents of the folders vary depending on which of the programs you are running they will not be covered in detail in this manual. Use the appropriate CORRIGO E controller manual for reference.

Startup

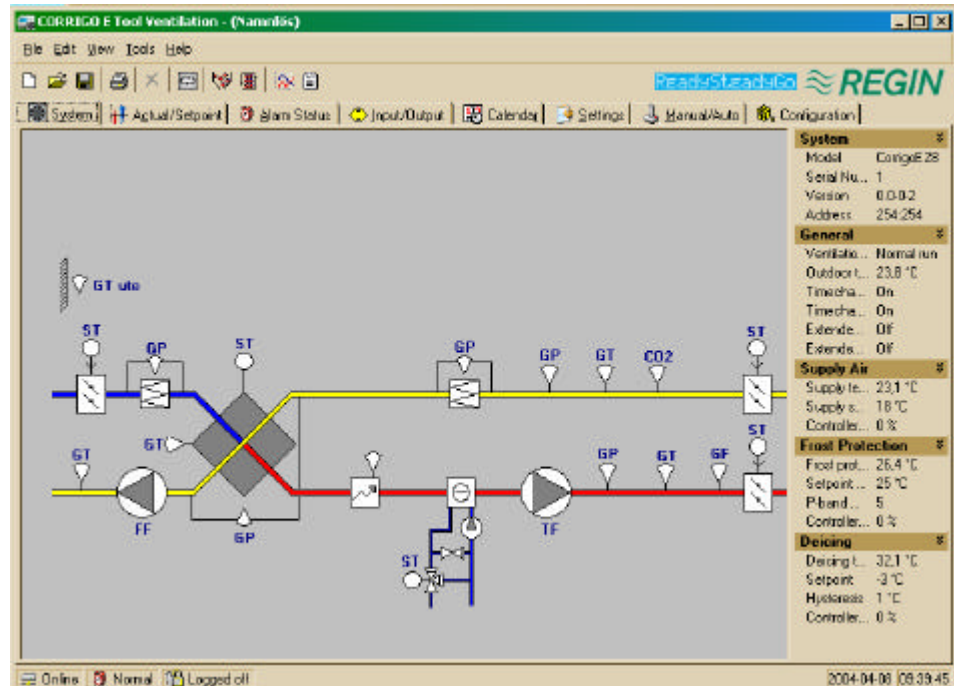


The installation program will have placed a Corrigo E Tool folder in the Programs folder in the Start menu. This folder contains the links to the two programs, Corrigo E Tool Heating and Corrigo E Tool Ventilation.

To start either program, click on the Start button at the lower left hand corner of the display. Then click on Programs, the folder Corrigo E Tool and finally the program you wish to run.

To save having to go through the Start folder, you can create a shortcut on the desktop by pointing at the program name, click and hold the right hand mouse button and drag the program name from the folder onto the desktop. Release the button and click on "Create shortcut here".

On start-up Corrigo E Tool will automatically search for any controller connected to the computer and connect to it if it is of a type suitable to the program being loaded. If no suitable Corrigo controller is found the program will start offline.



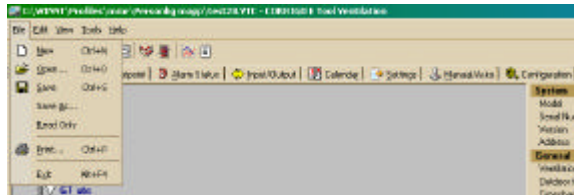
Corrigo E Tool will always start with a default setting to controller type E28 with the System folder displayed.

Menu bar

The menu bar has five drop-down menus:

File

These items are used to handle configuration files. The data describing a configuration can be saved as a file. Any number of different configurations can be saved, the only limit being available disk space. The file will have a .VTC extension and needs about 22 kb of disk space.



New

New will open a new unnamed file

Open

Opens a saved file

Save

Saves the current file to disk. If the file is unnamed you will be prompted for a name.

Save as

Saves the current file to disk using a new name of your choice.

Read only

This item can normally be ignored. Should you for some reason open two instances for the same file one of them will be marked as Read only to prevent data conflict.

Print

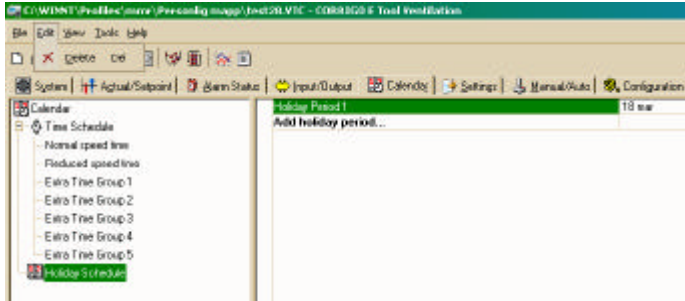
Will give a printed list showing all the configuration settings of the present file.

Exit

Close Corrigo E Tool. If the present configuration is unsaved you will be asked if you wish to save it before closing down.

Edit

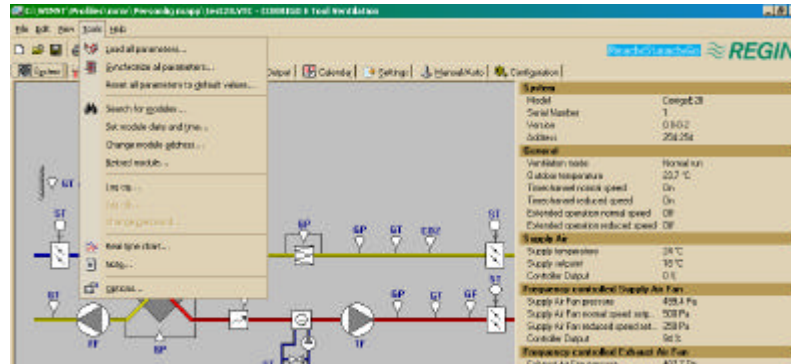
The edit menu only contains one item



Delete

Delete is only used in conjunction with Holiday periods. Use delete to remove assigned periods

Tools



Load all parameters

Download all present parameters from Corrigo E Tool to the Corrigo E controller.

Synchronize all parameters

All parameter values in the Corrigo E are compared with the corresponding values in Corrigo E Tool. All discrepancies will be listed. All items in the list are normally tick-marked. By removing the tick-mark from an item you can exclude it from the selection. You can then choose to update E Tool using the controller values or update the controller using the E Tool values.

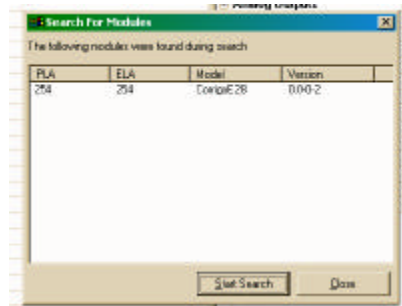
Reset all parameters to default values

Resets all Corrigo E Tool parameter values to default values.

Search for modules

If, on startup, Corrigo E Tool fails to establish contact with a connected controller it is usually due to an address mismatch. This function will search through all the possible addresses

until a unit is detected. The displayed address values are then written into the address fields in the folder Configuration / System.



Set module date and time

Will synchronize the controller date and time with the computer date and time.

Change module addresses

This function is inhibited for standard Corrigo E controllers. The address is normally 254:254 and should remain so since this is the address that Corrigo E Tool uses to find connected controllers.

Reload module

Downloads the current control program from E Tool to the controller. Use this function to update the controller with revised program. You can also use it to convert a Corrigo E Heating to a Corrigo E Ventilation and vice versa. Note though that since the hardware differs between controllers of different sizes, i.e. E28, E15 and E8, you cannot make an E28 out of an E8 or an E15 or an E15 out of an E8.

Log on

Corrigo E has three different log-on levels, 1, 3 and 5.

5 is the basic level with the lowest access, 3 is operator level giving more access and 1 is system level with full access.

Should you try to perform an operation which requires a higher access level than the one you have, you will be prompted to change log-on level.

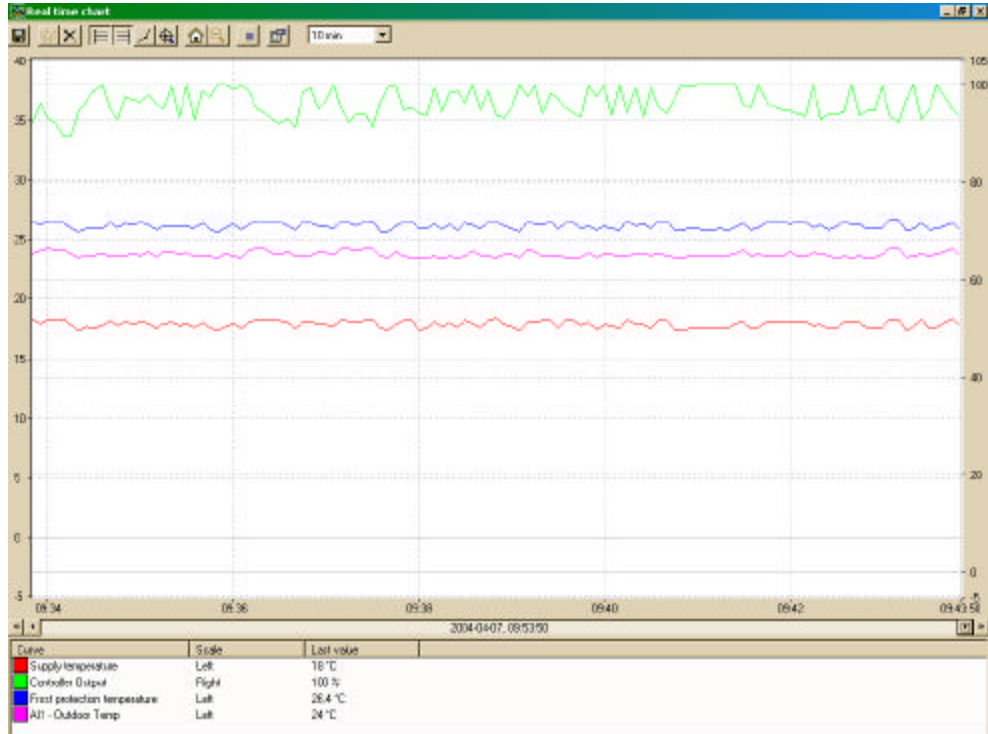
Log off

Is only active if you are logged-on as Operator or System. Enables log-off to the basic level.

Change password

Is only active if you are logged-on as Operator or System. Permits change of the password for the present log-on level.

Real time chart

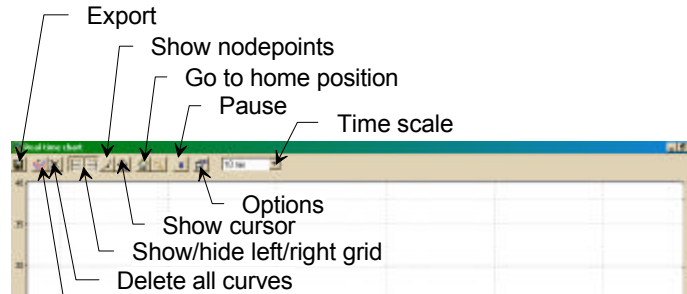


Creates a real time chart. Up to four parameters of your choice can be logged. The chosen parameters are listed at the bottom of the screen together with information on colour, which of the vertical scales it is referring to and latest recorded value. The chart has left and right vertical scales with individually settable ranges. The horizontal timeline can be changed so that the chart window can show longer or shorter intervals. Using the scrollbar at the bottom

of the chart you can scroll along the timeline to show any position since the recording started. Values are recorded every 5 seconds. All recorded values can be saved to a textfile for later use in, for example, a spread-sheet program.

The chart cannot be saved. On exiting all values and settings are lost.

Real time chart tools



Export

Exports all recorded values to a .txt file. The values are tab-separated for easy import to, for example, Excel. Each line of the text file contains the values from one recording together with the time for the recording.

Add curves

A click on this button reveals a list of all Corrigo parameters that can be displayed in the chart. Choose up to 4 parameters.

Delete all curves.

Deletes all the selected curves.

Show/hide left/right grid

Chart grids scaled to the left and right scales can be displayed or hidden.

Show nodepoints

A marker can be displayed on each curve at the point of each recording.

Show cursor

Displays a vertical line on the chart display. The cursor can be moved along the timeline. When the cursor is active, instead of showing the latest recorded values in the parameter list, the values at the cursor position are displayed. In this way you can check back on earlier record values.

Go to home

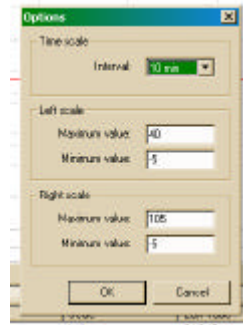
Home position is the chart position where you have the "recording pens" close to the right hand edge of the chart. If you have scrolled back along the timeline you can use this button to jump back to normal position.

Pause

Pauses the chart. The "paper" stops scrolling and no new curve segments are added. Data acquisition however continues and new readings are saved every 5 seconds. Press Pause again and all the saved readings will be added to the chart.

Options

Set various options



Time scale signifies the time width of the chart display.

Left scale / Right scale sets the scaling for the left and right chart scales.

Time scale

Sets the time width of the chart display.

Parameter list

Curve	Scale	Last value
 Outdoor temperature	Left	24,2 °C

The parameter list shows the parameters assigned to the chart. To remove a parameter, right-click on it and choose remove.

To change which of the right / left scales the parameter curve is referring to, right-click and choose properties or double-click with the left mouse-button.

Notes

Gives access to a notepad area. Any text written here is saved together with the configuration file. If you make a printout of the configuration the notepad text is included in the printout.

Options

Permits the setting of some program parameters.



Log-on timeout

After inactivity for longer than the set time the log-on level will be set to 5.

Number of decimals

Sets the number of decimals displayed. All calculations however, are always done with full precision.

Help

Gives access to help texts and revision information.

Toolbar

The toolbar provides shortcuts to some frequently used commands.



By placing the cursor over a tool icon a tooltip will be displayed giving a short description of the tool.

All the tools except for Refresh have been described in the menu bar description above.

Refresh

E Tool is not dynamic. That means that if a parameter value in the Corrigo changes, for example a temperature reading, this is not automatically reflected in E Tool. Reading of parameter values from the controller must be initiated by the E Tool user.

Refresh initiates a new reading of all dynamic values from the connected controller. The display is refreshed to show the new values.

Changing from one display folder to another will automatically initiate a refresh.

As an alternative to the refresh button you can use the function button F5 on your keyboard.

Folders

General

The contents of the various folders depend on which of the programs E Tool Heating or E Tool Ventilation you are running and also on which Corrigo model, E28, E15 or E8 that the program has been configured for.

Therefore the contents will not be described in detail here.

Items in a folder that somehow belong together are grouped. Group names are displayed in bold. The groups are normally shown expanded, that is that all the items in the group are displayed, headed by the group name. A group can be compressed to show only the group name by clicking on the box with a - (minus) to the left of the group name. For a compressed group the box will contain a +. Click on it to expand the group.

Setting values

Many of the folders contain settable values. If you pass the cursor over such a value a text box (tool tip) will be displayed showing the permitted value interval.

If you have a Corrigo connected you must download a value to the Corrigo for it to become active.

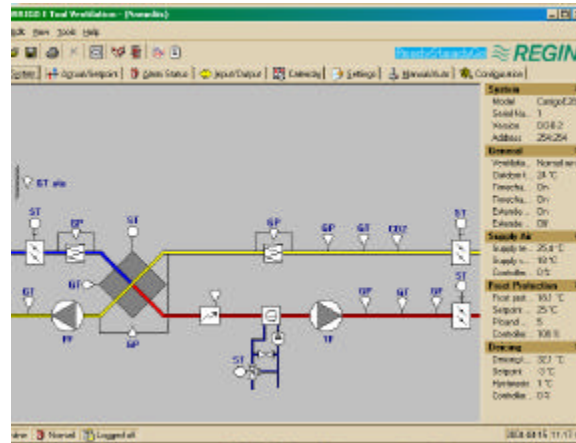
Downloading can be done in several ways:

1. Right-click on any single item and choose *Load parameters*. This will download only that single parameter.
2. Right-click on a group name and choose *Load parameters*. This will download all parameters in the chosen group
3. Click on the *Load all parameters* button on the toolbar.
4. Click on *Tools* on the Menu bar and choose *Load all parameters*.
These last two methods will, as the name implies, download all parameters to the Corrigo.

You can also synchronize parameters following the same rules as above but choose *Synchronize parameters*. A useful tool to compare the settings in the Corrigo with the settings in E Tool.

It is also possible to reset parameters to default values by right-clicking and choosing *Reset parameters to default values*.

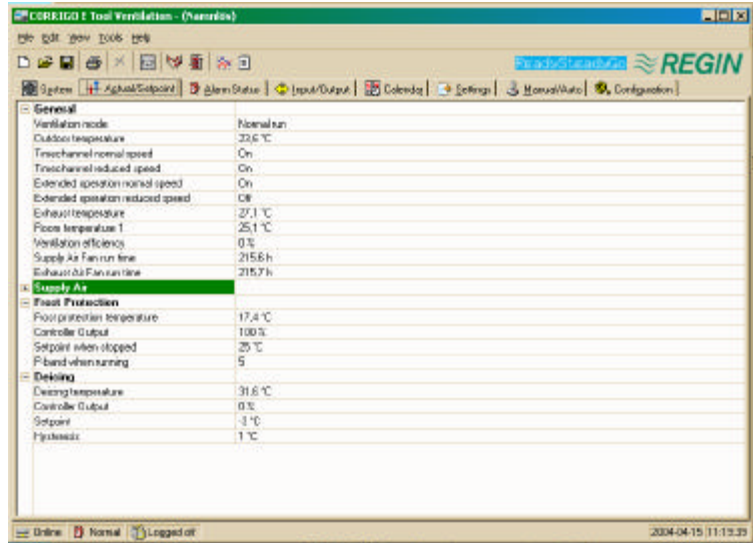
System



The major part of the System folder displays a process diagram. The diagram is a static bitmap illustration that can be edited using, for example Paint. Any number of different diagrams can be saved. Which diagram that is displayed is governed by the setting of the parameter *Process picture* in the System sub-folder in the Configuration folder.

Down the right-hand edge of the System folder there is a list of the most important control parameters. To update the values, press F5 or click on the refresh button in the tool bar.

Actual / Set-point



The screenshot shows the 'CORRIGO E Tool Ventilation - (Normal)' window. The interface includes a menu bar, a toolbar with icons for 'Spizten', 'Alpha/Setup', 'Alarm Status', 'Input/Output', 'Calendar', 'Settings', 'Manual/Write', and 'Configuration'. The main area displays a list of parameters under several categories: 'General', 'Supply Air', 'Freeze Protection', and 'Deicing'. The 'Supply Air' category is currently selected and highlighted in green. The status bar at the bottom indicates 'Online', 'Normal', and 'Logged off' with the date and time '2024-04-15 11:13:39'.

Category	Parameter	Value
General	Ventilation mode	Normal run
	Outdoor temperature	32,6 °C
	Traschannel normal speed	On
	Traschannel reduced speed	On
	Extended operation normal speed	On
	Extended operation reduced speed	Off
	Exhaust temperature	27,1 °C
	Floor temperature 1	25,1 °C
	Ventilation efficiency	0%
	Supply Air Fan run time	215,6 h
Exhaust Air Fan run time	215,7 h	
Supply Air		
Freeze Protection	Freeze protection temperature	17,4 °C
	Controller Output	100%
	Setpoint when stopped	25 °C
	P band when running	5
Deicing	Deicing temperature	31,6 °C
	Controller Output	0%
	Setpoint	-3 °C
	Hysteresis	1 °C

Displays actual values for inputs and outputs and relevant set-point values.

Real time chart

When right-clicking on some of the groups you are given the option of creating a real time chart. This chart will be created containing the four first recordable parameters in the group.

Alarm status

The screenshot shows the 'CORRIGO E Tool Verification - (Nameless)' application window. The 'Alarm Status' tab is active, displaying a table of alarm objects. The table has columns for 'Alarm objects', 'Class', 'Delay', and 'Status'. The status column uses color-coded boxes to indicate the alarm's state: green for non-activated, yellow with an exclamation mark for active, and white with a red border for reset, not acknowledged.

Alarm objects	Class	Delay	Status
P11-Heater is out of operation	B	5 s	Green box with blue arrow
P11-Cooler is out of operation	B	5 s	Green box
P11-Exchanger is out of operation	B	20 s	Green box
Filter guard	B	180 s	Yellow box with exclamation mark
Flow guard	B	5 s	Green box
External host guard	A	0 s	Green box
Fire alarm	A	0 s	Green box
External switch	C	0 s	Green box
External alarm	B	0 s	Green box
Supply Air control error	B	30 min	Green box
High supply air temp	B	5 s	White box with red border and exclamation mark
Low supply air temp	B	5 s	Green box
High room temp	B	30 min	Green box
Low room temp	B	30 min	Green box
High exhaust air temp	B	30 min	Green box
Low exhaust air temp	B	30 min	Green box
Electric heating is overheated	A	0 s	Green box
Frost risk	B	0 s	Green box
Low host guard temp	A	0 s	White box with red border
Low efficiency	B	30 min	Green box
Sensor error	B	5 s	Green box
Rotation guard exchanger	B	20 s	Green box
Fire clamped is out of operation	B	90 s	Green box
Supply Air Fan external operation	C	120 s	Green box
Exhaust Air Fan external operation	C	120 s	Green box
Ventilation stopped	C	0 s	Green box

At the bottom of the window, the status bar shows 'Online', 'Alarm active', and 'Logged on Operator' with the date and time '2004-04-15 12:01:00'.

Permits handling of all enabled alarms.

The alarm settings can be changed by either double-clicking on the alarm you wish to change or by marking the alarm and then clicking on the button *Settings*.

Alarm settings can also be changed in the folder *Settings/Alarm objects*.

Changes made to alarm settings must be downloaded to become active.

Non-activated alarms are shown with a green status box

Active alarms have a yellow, red-bordered box with an exclamation mark.

Reset, not acknowledged alarms have a white, red-bordered box.

Active, acknowledged alarms have a blue box with a white tick-mark.

Blocked alarms have a gray box with a black X.

Any changes made to alarm status in E Tool are instantly transmitted to the controller without the need to use *Load parameters*.

Changes in alarm status in the controller however are not displayed in E Tool until you make a refresh.

To keep track of changes in alarm status when looking at other folders, look at the alarm box in the status bar at the bottom of the window.

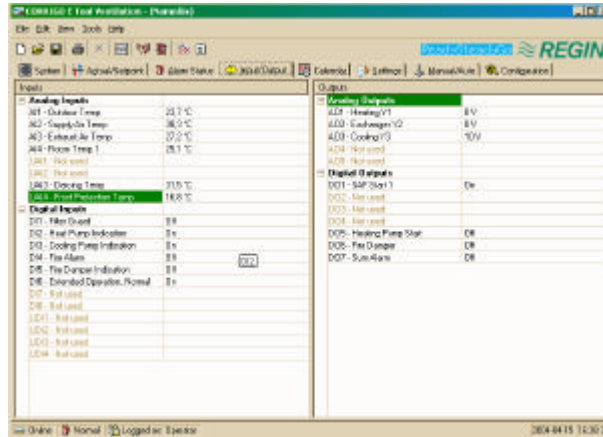
A and B alarms will activate the digital outputs A-alarm and B-alarm respectively if configured. Both will activate the Sum alarm output if configured.

C alarms are internal only.

C alarms need not be acknowledged. Once they reset, they automatically return to normal status.

Alarms can be shown according to class, A, B C or All classes and according to status, Normal, Blocked, Acknowledged, Returned, Alarm active and All statuses.

Inputs/Outputs



The screenshot shows the 'CORRIGO E Tool Ventilation - Parameters' window. It is divided into two main sections: 'Inputs' and 'Outputs'. The 'Inputs' section is further divided into 'Heating Inputs', 'Cooling Inputs', and 'Duct Air Inputs'. The 'Outputs' section is divided into 'Heating Outputs' and 'Digital Outputs'. The status of each input and output is indicated by a color-coded box: green for active, red for error, and gray for unconfigured. The 'Heating Inputs' section shows values for outdoor, supply, exhaust air, and room temperatures, along with frost and cooling temperatures. The 'Cooling Inputs' section shows a value for condensation temperature. The 'Duct Air Inputs' section shows values for filter, fan pump, cooking pump, fire alarm, fire danger, and extinguished operation. The 'Heating Outputs' section shows values for heating, exhaust, and cooking outputs, along with frost and digital outputs. The 'Digital Outputs' section shows values for various digital outputs, including SAP, fire danger, and sub-alarm.

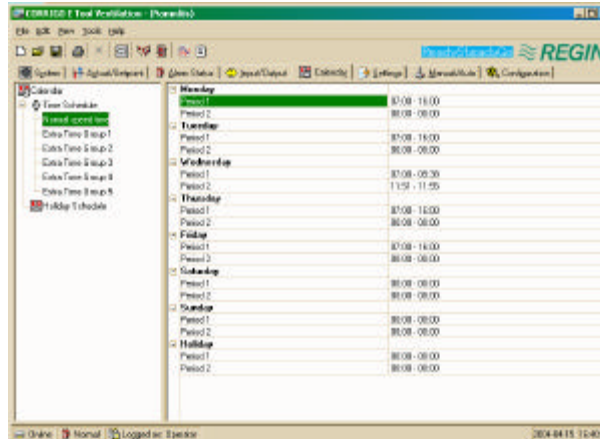
Category	Parameter	Value/Status
Inputs	Heating Inputs	
	AI1 - Outdoor Temp	23.1 °C
	AI2 - Supply Air Temp	36.0 °C
	AI3 - Exhaust Air Temp	27.2 °C
	AI4 - Room Temp 1	23.1 °C
	AI41 - Not used	
	AI42 - Not used	
	AI43 - Cooling Temp	33.5 °C
	AI44 - Condensation Temp	14.0 °C
	Cooling Inputs	
CI1 - Filter Duct	0.0	
CI2 - Fan Pump Indicator	0.0	
CI3 - Cooking Pump Indicator	0.0	
CI4 - Fire Alarm	0.0	
CI5 - Fire Danger Indicator	0.0	
CI6 - Extinguished Operation, Normal	0.0	
CI7 - Not used		
CI8 - Not used		
CI41 - Not used		
CI42 - Not used		
CI43 - Not used		
CI44 - Not used		
Outputs	Heating Outputs	
	AO1 - Heating V1	EV
	AO2 - Exhausting V2	EV
	AO3 - Cooking V3	10W
	AO4 - Not used	
	AO5 - Not used	
	Digital Outputs	
	DO1 - SAP Stage 1	On
	DO2 - Not used	
	DO3 - Not used	
DO4 - Not used		
DO5 - Heating Pump Stop	On	
DO6 - Fire Danger	On	
DO7 - SubAlarm	On	

Shows actual values for all inputs and outputs.

This is a read-only folder. No settings can be made here.

Un-configured inputs and outputs are grayed.

Calendar



E Tool Heating

Here you set the daily comfort periods.

Each control function has its own set of daily schedules

For each day there are two periods.

The schedules for the extra timer channels govern the activation of the digital outputs, if any, configured as timer outputs.

The 8th day, *Holiday* governs the activity on all days marked as holidays in the holiday calendar, see below.

E Tool ventilation

If single-speed fans have been configured there is only one set of daily schedules.

If two-speed or pressure controlled fans have been configured there will be two sets of daily schedules. One for normal running speed and one for reduced speed.

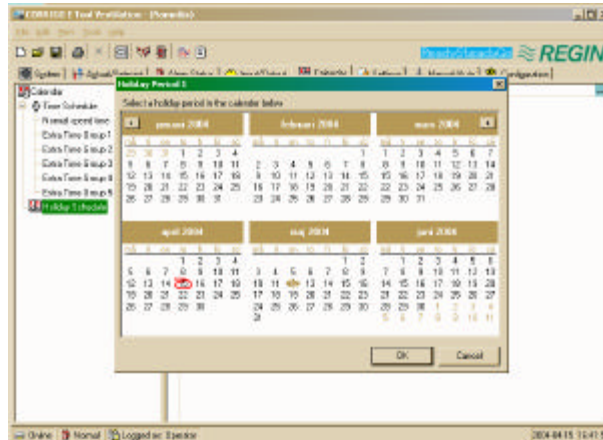
For each day there are two periods.

Should the running periods for normal and reduced speed overlap, normal speed will take precedence.

The schedules for the extra time group govern the activation of the digital outputs, if any, configured as timer outputs.

The 8th day, *Holiday* governs the activity on all days marked as holidays in the holiday calendar, see below.

Holiday schedule.



Up to 24 separate holiday periods can be configured. A holiday period can be anything from one day up to 365 consecutive days.

To create a holiday period, click on the button at the right hand end of the line *Add holiday period*.

To pick a single date, click on it, a marker will indicate your choice, then click on OK

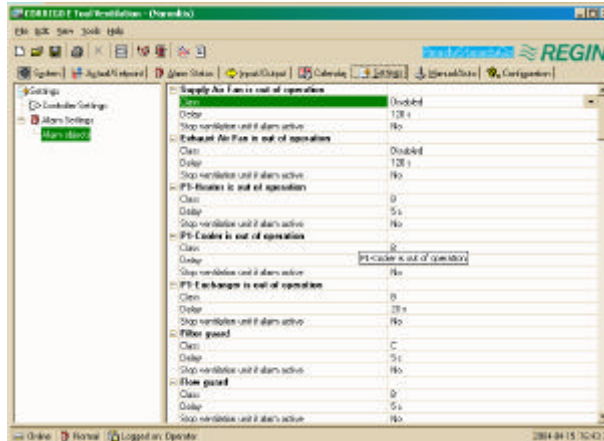
To pick a period, click and hold on the first date, drag the cursor to the last date and release the button. The period will be marked. Click OK.

Alternatively, click on the first date, depress and hold the shift-key on your keyboard and click on the last date of the period. The full period should be marked. Click OK

Although the calendar seems to extend far into the distant future, holiday periods can only extend up to one year from the present date. Should you choose a date further ahead than one year, the date will be replaced by the same date within one year from the present.

To remove unwanted holiday periods, use the delete button in the toolbar.

Settings



Controller settings

Setting of the control parameters.

Parameter setting-interval endpoint values and default value are displayed if you place the cursor over a parameter value.

Changes must be downloaded to the controller in order to take effect.

To download, right-click on a parameter name or a parameter group name and choose *Load parameters*, or click on Load all parameters in the toolbar or the Tools menu.

Alarm settings / alarm objects

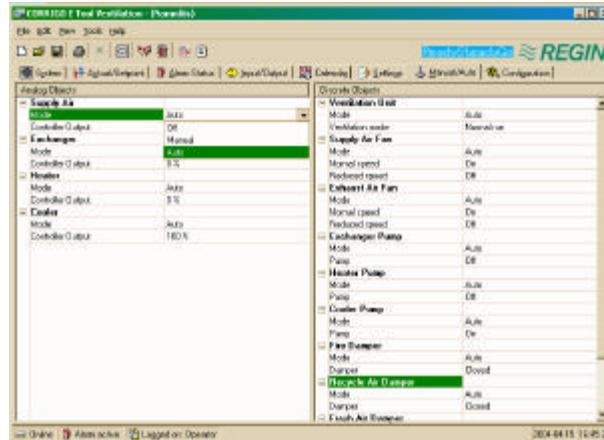
Setting of alarm parameters.

These settings can also be made in the Alarm status folder. See section on Alarm status above.

Disabled alarms will be removed from the alarm list in the Alarm status folder.

A and B alarms will activate the digital outputs A-alarm and B-alarm respectively if configured. Both will activate the Sum alarm output if configured.
C alarms are internal only.

Manual / Auto

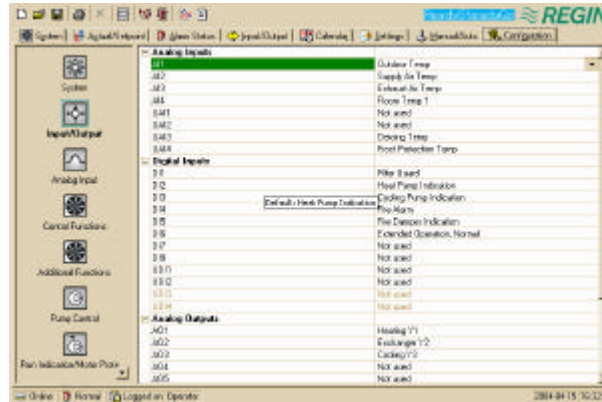


In this menu you can take manual command of most controller functions. Very useful for testing purposes.

Setting functions to manual command will generate alarms to ensure that control is returned to Auto.

In this menu all changes are instantly downloaded to any attached controller, it is not necessary to run *Load parameters* for changes to take effect.

Configuration



This folder contains all the configuration parameters for the Corrigo. Since the contents are very diverse, the folder has been divided into sub-folders. These are accessed by clicking on the buttons in the left-hand button-list.




ONE STEP FURTHER...

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