
ADSORPTION DEHUMIDIFIER A50 TD2

USER MANUAL



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User Manual A50 TD2

Intended use

The A50 TD2, a trailer based, high capacity adsorption dryer, is developed and intended for construction drying and water damage restoration. Through use of adsorption drying, it does not have the same dependency on ambient temperature as condensation dryers have and functions even well below the freezing point. The trailer allows both crane lift as well as fork lift transportation, and as it can be used both indoors and outdoors, the A50 TD2 is truly deployable, readily and easily used where ever required.

To further strengthen the ease-of-use, the new A50 TD is equipped with PLC control and a 7 inch, touch screen computer from where the system is supervised. Start-up and stop sequences are automated, on on-board manual provides guidance and if errors are detected in the system, the corrective actions to be undertaken are described with pictures and text.

As all other Corroventa machines, the A50 TD is very energy efficient. . Through a patented solution, the heat from the wet air is efficiently transferred to the process air and thus reused. The A50 TD is also equipped with a 12,5kW extra heater that can be used as and when required.

Features:

<ul style="list-style-type: none">• Energy efficient	<ul style="list-style-type: none">• Service friendly
<ul style="list-style-type: none">• High Capacity	<ul style="list-style-type: none">• Hour and kWh counters
<ul style="list-style-type: none">• Robust	

Waiver of Liability

- Faulty, incorrect installations and/or incorrect use can cause damage to property and human injury.
- The manufacturer assumes no responsibility or liability for damages or injuries caused by non-compliance with the instructions herein, use for other purposes than the intended, or failure to observe its warnings. Such damage, injuries or liabilities are not covered by the product warranty.
- The product warranty does not cover consumables or normal wear and tear.
- It is the responsibility of the buyer to inspect the product at time of delivery and before use to ensure its good function. The product warranty does not cover damage resulting from use of faulty products.
- Changes or modifications to the equipment must not be made without written consent by Corroventa Avfuktning AB.
- The product, technical data and/or installation and operation instructions can be changed without prior notice.
- This manual contains information that is protected by the Intellectual Property laws. No part of this manual may be copied, stored in an information system or transferred in any form or in any way without the written consent of Corroventa Avfuktning AB.

Any comments on the contents of this document shall be sent or addressed to:

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Safety information

This equipment is not intended to be used by individuals with physical or mental disabilities impeding their operation or understanding of it or by individuals lacking required knowledge or experience unless they are supervised and instructed by another person with responsibility for their safety.

Children must only use this equipment under supervision of an adult to ensure that it is not used as a toy, something that it is not designed for.

Electrical installations made in connection with the installation of the dehumidifier or the CTR 500XT shall be made by authorized personnel in accordance with local and national regulations.

Furthermore, the following warnings and instructions shall be read and observed:

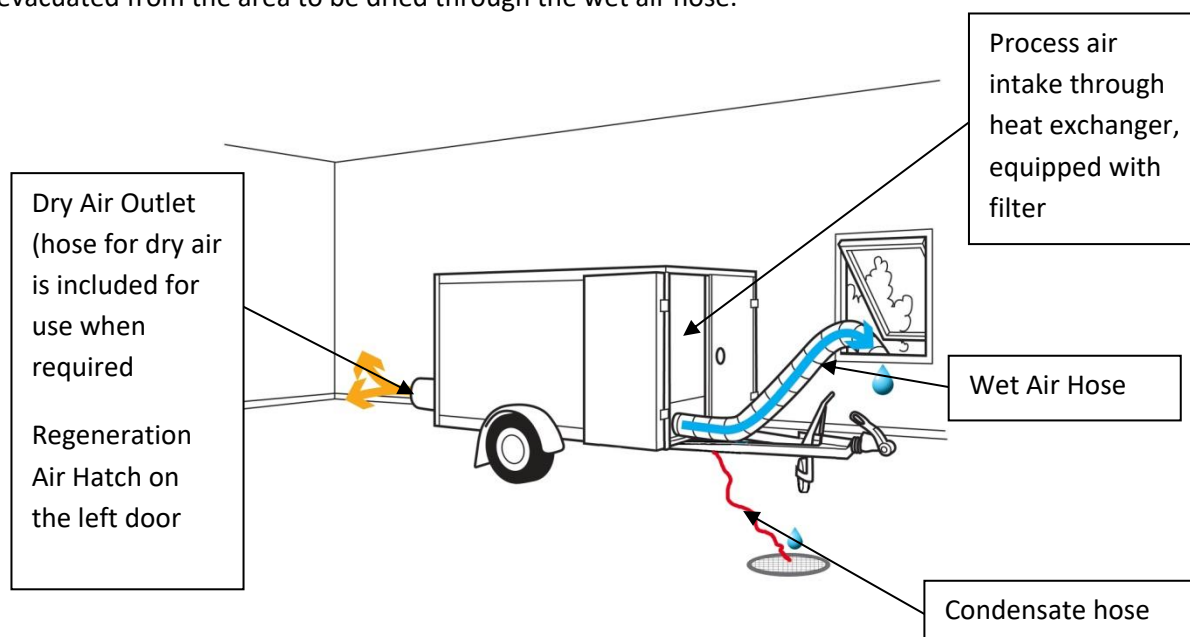
1. The dryer must not be powered until the installation is finished in accordance with this manual.
2. The powered dryer must not be covered as this can lead to overheating and fire hazard.
3. The dryer must not be used to sit, step or stand on.
4. Never use the dryer without the filter installed as this can cause damage to it. Ensure that the filter is clean. A cluttered filter can cause the dryer to overheat.
5. Bases or organic material with high boiling point such as oil, fat, solvents, boracol or similar substances must not be drawn into the dryer. It may damage the rotor.
6. The dryer must not be used in spaces where explosive gases can be present.
7. Do not stick objects into the air outlets or intakes as this can cause damage to the machinery as well as human injury.
8. Install the dryer steadily and leveled, lower the rear stabilizer and apply parking brake and wheel chocks so that the trailer remains in place.
9. Keep children, animals and spectators away from the work place while installation is undertaken.
10. If the dryer is broken, if the power connector or the cable is damaged, contact the authorized service technician. Do not repair the equipment if you have not received specific training by the manufacturer.
11. Be careful not to damage the power cable. The cable must not go through water or pass sharp edges.
12. Never tow the dryer by its cable.
13. To use electrical equipment in humid or wet environment can be dangerous. Never power the dryer if it is standing in water.
14. A residual-current device / ground fault circuit interrupter should be used to minimize the risk of electric shocks.
15. Water must not come in contact with the electrical components of the equipment. If this has happened, ensure that the equipment is dry before it is used again.
16. The power must always be disconnected before the electric cabinet is opened.
17. If the dryer is set to emergency mode, one or several alarms deactivated, it must never be left operating unattended.
18. Repairs to the electronics/electrical system of the A50TD2 must only be made by qualified electrician.
19. The dryer must never be used with any other accessories than those listed in this manual or those specifically approved by Corroventa Avfuktning AB.

For further advice on product safety and use, please contact the supplier.

How the dehumidifier works

Although much larger and with much higher capacity, the A50TD works according to the same principles as the portable adsorption dryers of the Corroventa product portfolio. The rotor is coated with Silica Gel, a crystal with enormous amounts of microscopic pores which makes its total surface very large. A single gram has an active surface of 500 to 700m² and the material can absorb water corresponding up to 40% of its own weight. Silica gel is not water soluble and can therefore not be washed away nor dissipate into the passing air.

The patented method where a fan draws the process air through the filter and the heat exchanger, located in the front of the machine, allowing this air to recycle the heat from the wet air leaving the machine. The process air then passes the rotor, letting the Silica Gel dry it, after which it passes the Extra Heater and then leaves the machine through the dry air outlet on the rear right door. Meanwhile, another fan is drawing regeneration air through the regeneration air hatch on the rear left door. This air is heated by the regeneration heater before it moves through a sector segment of the rotor and then to the heat exchanger in the front where its temperature is lowered and the energy transferred to the incoming air. In this process, some condensate is generated in the heat exchanger, free water that is evacuated through the condensate hose, assisted by a built-in pump. The remaining water is carried as vapour by the wet air that is evacuated from the area to be dried through the wet air hose.



Product Overview

Below pictures present A50 TD2.



Air and condensate hoses located behind front left door together with power cables, fire extinguisher, spare filters and tool for rear stabilizer

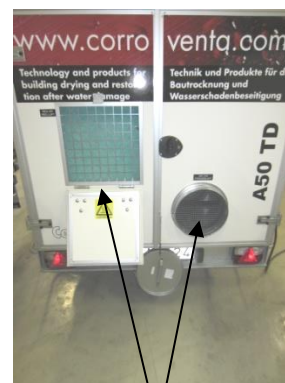
Process Air Intake, front left door must be open during operation

Drainage under trailer floor.

If the pump malfunctions, the water can be drained manually.

Wet Air Outlet

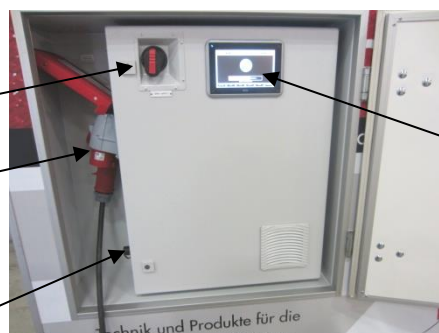
Air bypass hatch. Reachable through the wet air outlet



Main Power Switch

Mains Power Intakes, main and extra heater

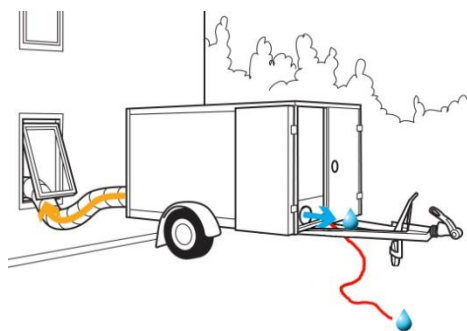
Connector for external humidistat



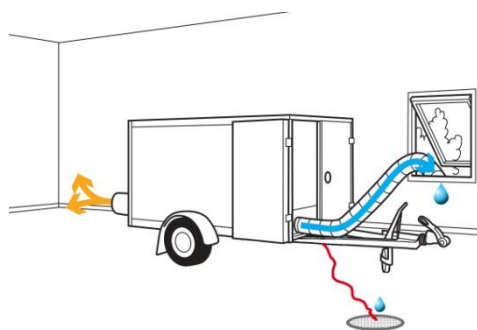
Installation

The A50TD2 can be used and positioned both indoors and outdoors as depicted below. When the machine is positioned outdoors, the generated dry air is led into the building to be dried through the dry air hose.

When used indoors, the condensate hose must be led to suitable evacuation point, e.g. floor drain, sink etc. The wet air is evacuated through a wet air hose led through window or other opening.



Outdoor use



Indoor use

Installation Instructions

Secure the trailer

When the trailer has been moved to its intended position and leveled:

- Apply the parking brake and the wheel chocks
- Lower the rear stabilizer

Open regeneration hatch and front right door

To allow required air flow through the machine:

- Open the regeneration air hatch on the rear right door.
- Open the front left door and secure it to the side of the trailer so that it is not accidentally closed later on. Behind this door is the process air intake, covered by a filter.

Install hoses

Install required hoses. The hoses are all stored in the front of the trailer.

The wet air hose and the dry air hose are turned slightly clockwise to lock them on to the outlets.

The condensate hose is led to suitable evacuation point.

Install power cable(s)

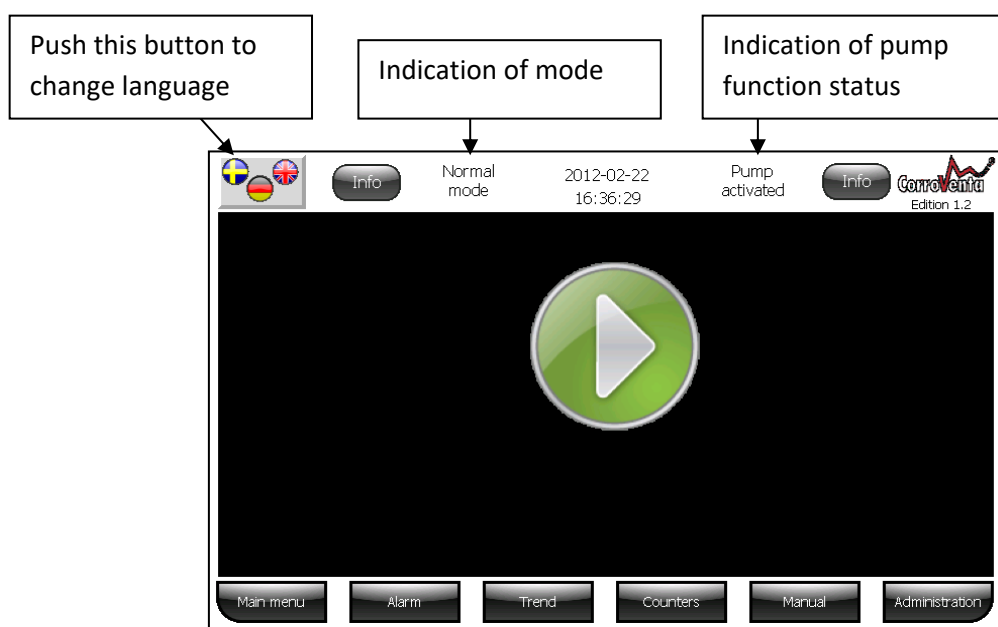
In the front of the trailer, there are two 32 A power cables used to connect the machine to mains power as the Extra Heater, optionally used, has a separate supply.

If the Extra Heater will not be used for given work, connect only to the rear connector on the right section of the power cabinet. The power cabinet is found behind the hatch on the right side of the trailer.



Start the machine

After completion of all previous steps, turn on the mains power switch on the front of the power cabinet. In less than a minute, the below screen is presented on the touch screen display.



Please note that already at power-up, the machine starts monitoring its alarm criteria. Consequently, in case for instances the rear doors are not closed, an Alarm viewer will be presented in the top section instead of the mode and pump status indications. For further information on this, please see the Alarm section of this manual.

Change language if so required by pushing the button in the upper left corner.

Observe the indications in the upper segment. Normal mode means that all alarm functions in the system are active. In Emergency mode, one or several alarm functions have been deactivated through the Administration menu and the machine must not be left unattended. This mode is only to be used in emergency situations where drying needs to continue while the service technician and the required spare parts are on the way to the site.



While in Emergency mode, the machine must not be left operating unattended.

The Pump status presented in the upper segment of the display refers to the condensate pump. While this function is active, the pump starts automatically every ten minutes. If the temperature is so low that ice can form in the pump, the pump function shall be deactivated to prevent pump damage. The pump function status is altered in the Administration menu.



If rather than the first screen, the screen above is presented at start-up, push the stop button to prevent the machine from reactivating with its previous settings. The reason for this being presented is that the last time the machine was used the user never pushed the stop button but stopped the machine by disconnecting power.

When the above has been observed, push the green start button and the below start configuration screen will be presented.

Verify start configuration

Mode

Manual

Man / Humidistat

Extra Heater

Off

Extra heater On/off

Current work: Work1

Started:

Hrs: 0 KwHrs 0

Reset/Start new

Start

Escape

Select desired mode of operation. Manual for continuous drying or Humidistat for external humidistat control. For the latter mode, a humidistat must be connected to the system and corresponding connector is situated below the mains power connectors to the left of the power cabinet.

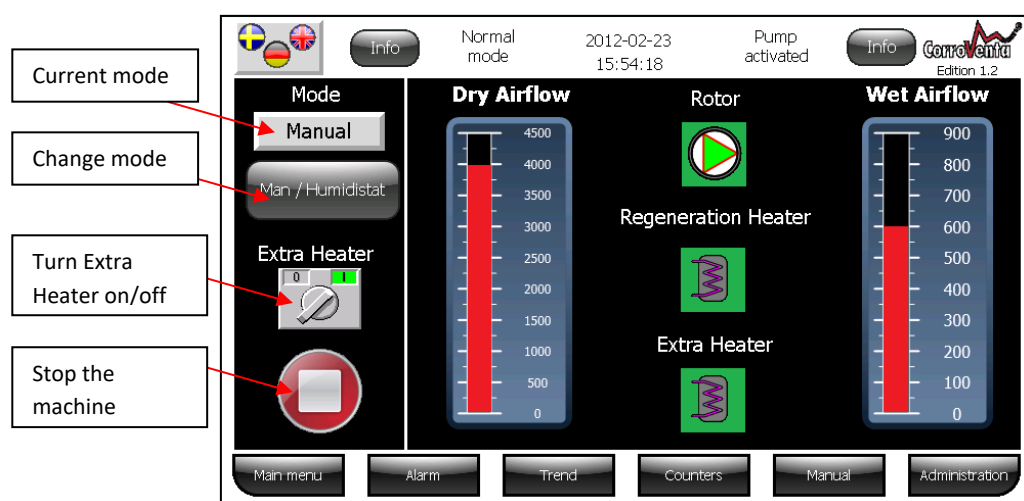
Select Extra Heater operation, on or off. This function can be also be changed during operation.

If desired, reset work counter - to keep track of power consumption and hours of operation for given work.

Push Start and the machine will start up automatically.

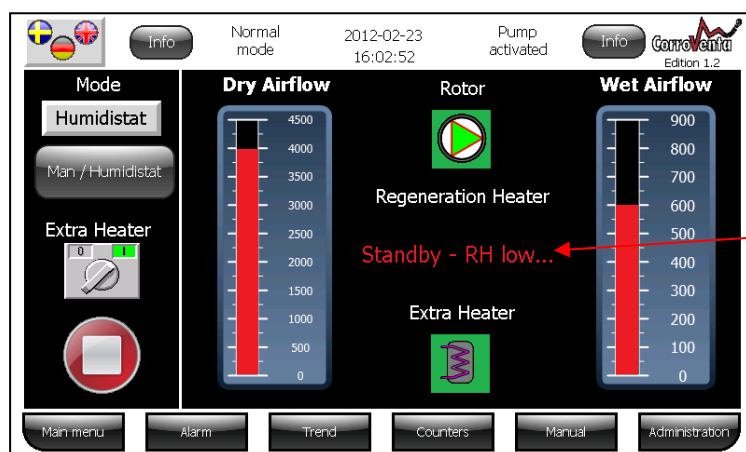
Main View

When Start is pushed, the main presentation will look as depicted below. In the left section of the display, from the top, there is an indicator of current status, a mode change button, an Extra Heater power switch and a stop button that stops the operation of the machine. The right section of the display is flanked by volume indicators for Dry Air and Wet Air respectively. The Wet Air volume is regulated by an automated damper which is why the Wet Air volume, after start, slowly rises to the target value of approximately 600 m³ per hour.



In the center there are three indicators for, from the top, Rotor, Regeneration Heater and Extra Heater. When activated, they are all green. The Regeneration Heater is the one that supports the drying process. The Extra Heater is only optionally used if so required to keep a good working climate in the facility to be dried.

If Humidistat mode is used and the current ambient Relative Humidity is lower than the set point of external humidistat, no drying is currently required, the Regeneration Heater symbol is replaced with a "Standby – RH low..." indication as depicted below. While this text is displayed, the machine is not drying, only its fans are active to maintain air movement in the facility. The user is encouraged to, when using humidistat, test the good function of the device by initially setting it very low and observing that the Regeneration Heater symbol appears and thus that the machine starts drying.

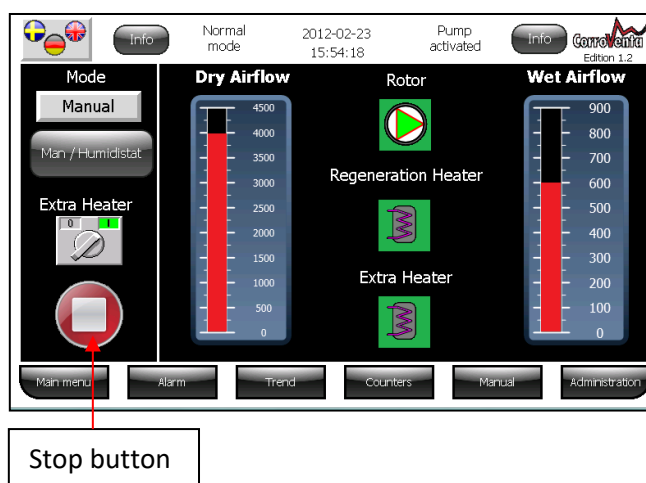


The external humidistat is not calling for drying, the Relative Humidity is lower than its set point.

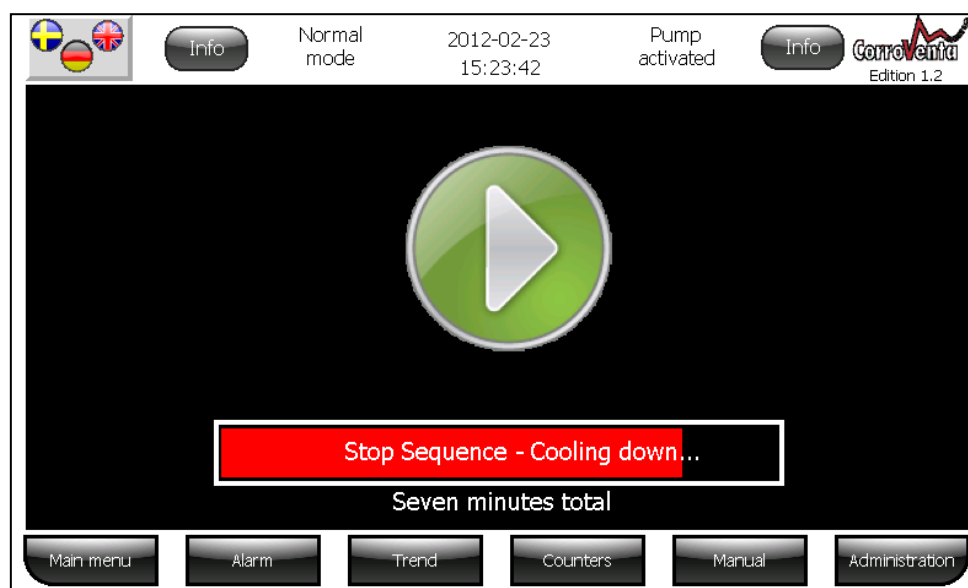
The machine is not currently drying although the fans are active.

After completion of drying process

When the work is finished, simply push the Stop button in the lower left corner of the display and the machine will automatically enter its shut-down, or cooling, phase. The Heaters are immediately stopped while the fans will continue for a while to cool the trailer interior preventing the overheat protection from triggering.



The cooling phase is seven minutes long and its progression is displayed in accordance with the picture below. The final step of the cooling phase triggers the built-in pump, evacuating remaining condensate from the heat exchanger. If the Stop button was pushed by mistake, the machine can easily be restarted by push of the Start button.



While the cooling down phase is progressing, the air hoses can be detached, folded onto their respective holders and put in their storage compartment in the front of the trailer.

When the cooling down phase is completed, turn off the main power switch of the machine. Disconnect the power cable and put it in its storage in the front of trailer, below the hoses.

Put the condensate hose back in its storage.

Put the rear stabilizer back up in its transport position and remove the wheel chocks.

Close all hatches and doors and put the dry air outlet lid back on to make the trailer ready for transportation.

MMI functions, Software menus

Alarms

The A50TD implements a number of different alarms that are automatically triggered if errors in the process are sensed or identified. For information on trouble-shooting a particular alarm, please refer to the Alarm information – Trouble-shooting guidance section at page 15.

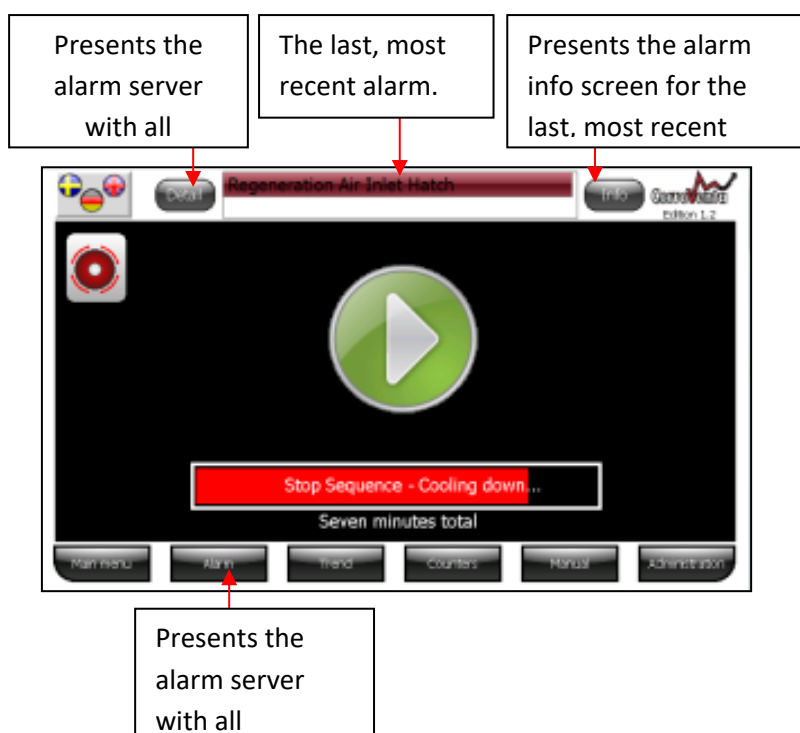
The triggering of an alarm automatically stops the machine and it goes into its shut-down and cooling phase. The only exception to this rule is the Extra Heater not connected alarm which is shown the same way as the others but which does not interrupt the operation of the machine, the drying process still continues.

Alarm	Consequence / management
Extra Heater not connected	The machine indicates the alarm but will continue its drying process. The Extra Heater is a final step in the process that increases the temperature of the already dried air.
Front left door, Rear doors and Regeneration Air Hatch alarms	Will interrupt the process and make the machine enter its shut-down phase. These alarms are however automatically reset when the problem is corrected. Front left door shall be open. Rear doors shall be shut. Regeneration Air Hatch shall be open.
Remaining alarms	Will interrupt the process and make the machine enter its shut-down phase. These alarms must be manually acknowledged in order for the machine to restart. Prior to acknowledging the alarm, the user shall follow and execute the instructions of the given alarm.

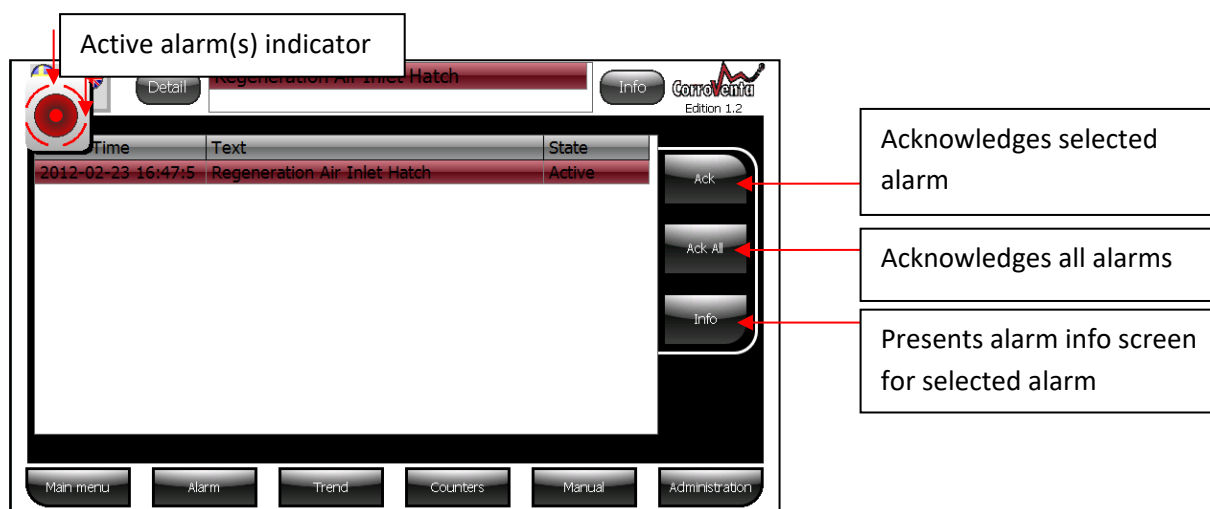
The reason for not alarms being automatically reset is safety. The corresponding errors are of such a nature that the machine and/or its installation need to be inspected before the machine resumes operation. As all other alarms, the actions to be undertaken by the user are clearly described in text, and where applicable also pictures.

Whenever an alarm is triggered, in addition to the machine entering the shut-down and cooling phase, an alarm viewer is presented in the top section of the display. In the center, the name of the alarm is presented and this text is flanked by two buttons, respectively Detail and Info.

The Detail button presents the Alarm Server view with all alarms that have been triggered whereas the Info button presents an Alarm Info view for the latest, most recent alarm. The Alarm Info view is where all information with how to proceed and to mitigate the alarm is presented.





In the Alarm Server view, the user can select the alarm of interest by clicking it in the list. To the right there are three buttons for individual acknowledgement, acknowledgement of all alarms and presentation of info screen.




Alarm information – Trouble-shooting guidance

The below table, continuing another four pages, gives information on the reasons for, and the trouble-shooting of, all implemented alarms. At the end of this section, there is a picture indicating relevant components/modules in the A50TD2 cabinet.

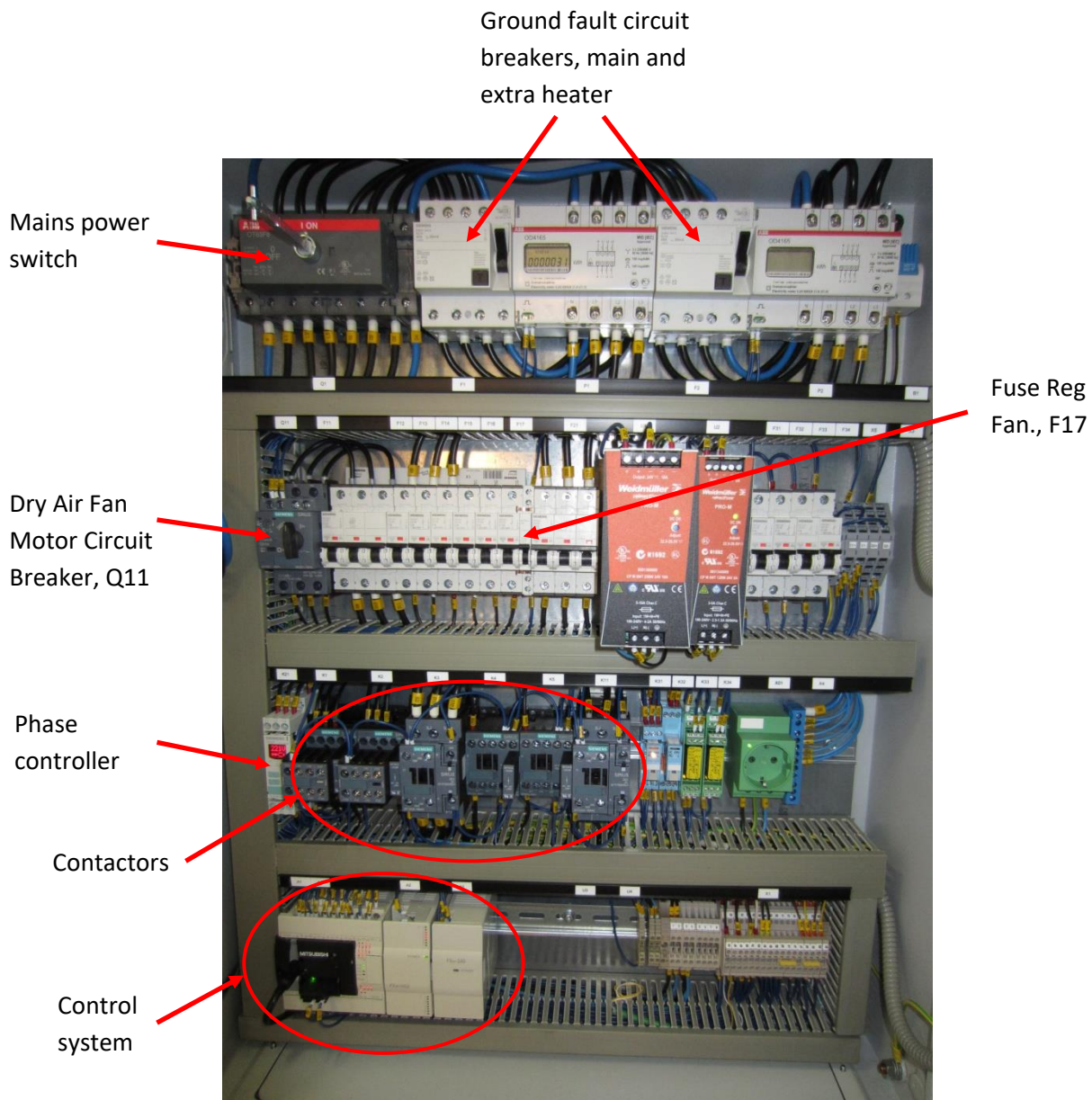
Alarm	Info/Guidance
Dry Air Fan Contactor	<p>After triggering of the contactor, the control system did not receive the expected response confirming that the contactor was activated.</p> <p>Acknowledge the alarm and restart the machine. If this does not work and the alarm is repeated, please contact authorized service technician.</p>
Dry Air Fan Motor Circuit Breaker	<p>The circuit breaker was triggered.</p> <p>Please, let the machine cool down and then turn the mains power switch off and disconnect the power cable before opening the cabinet to reset the circuit breaker with position Q11 .</p> <p>If afterwards, when the machine restarted, the alarm is repeated, please contact authorized service technician.</p>
Extra Heater Contactor	<p>After triggering of the contactor, the control system did not receive the expected response confirming that the contactor was activated.</p> <p>Acknowledge the alarm and restart the machine. If this does not work and the alarm is repeated, please contact authorized service technician.</p>
Extra Heater not connected	<p>The machine cannot detect any power consumption from the Extra Heater and has concluded that it is not connected.</p> <p>If Extra Heater is to be used, please trouble-shoot as follows, step by step until the problem is resolved:</p> <ol style="list-style-type: none"> 1. Check that its separate power supply cable is connected to the front power inlet on the left side of the cabinet. 2. Check that the power outlet used is in order, that there is indeed power, and that the power cable itself is functional. 3. Check that the internal Extra Heater power cable is connected by opening the rear door and inspecting the first of the three cable connectors on the back side of the cabinet.  <ol style="list-style-type: none"> 4. Contact authorized service technician.

Alarm	Info/Guidance
Extra Heater Overheated	<p>The likely cause of this is that the machine was not allowed to cool down before the power was connected after previous work or that, while the machine has been operating, the dry air flow has been insufficient.</p> <p>Please, let the machine cool down and then open the rear door. Reset the overheat protection by pushing the red button on top of the Extra Heater using a pen or similar object.</p>  <p>If the heater has reached a low enough temperature and the button is pushed deep enough, a mechanical click sound will be heard from the overheat protection that was triggered, normally only one of the three. If not, wait for the heater to cool down further and try again.</p> <p>Check and, if necessary, replace regeneration air filter. Check that, if it is used, the wet air hose is not squeezed and that there is nothing else hindering the air flow through it.</p>
Front left door	<p>Open front left door and the alarm will automatically be reset. If the alarm was triggered during operation, the machine will also resume operation.</p> <p>If it is open and this false alarm is repeated or constant, the alarm can be temporarily deactivated allowing use of the machine while waiting for contacted authorized service technician to arrive. See Admin menu and Alarm control function section for further information.</p>
Fuse Reg Fan.	<p>The fuse in position F17 was tripped.</p> <p>Please, let the machine cool down and then turn the mains power switch off and disconnect the power cable before opening the cabinet to reset the fuse.</p> <p>If afterwards, when the machine restarted, the alarm is repeated, please contact authorized service technician.</p>

Phase Failure	<p>The Phase Controller detected an error with the incoming power supply and shut down the machine to protect is from damage. The most likely cause of this alarm naturally problems with the power supply, that one phase is missing or that the voltage on one or several phases is too low. The machine is set to tolerate 208V to 249V. Check that all three phases are live in the power supply, that no fuse has been tripped and that the power cable itself is correct. The Phase Controller automatically adjusts for the phase sequence allowing so there is no need to consider that.</p> <p>If incoming, nominal phase voltages are measured, please consider that the load created on the phases by the activation the machine will reduce the voltage. If the nominal values are low to begin with, this dip can be enough to make them drop below the 208 V threshold.</p>
Rear doors	<p>Close rear doors and the alarm will automatically be reset. If the alarm was triggered during operation, the machine will also resume operation.</p> <p>If they are closed and this false alarm is repeated or constant, this alarm can be temporarily deactivated allowing use of the machine while waiting for contacted authorized service technician to arrive. See Admin menu and Alarm control function section for further information.</p>
Regeneration Air Fan Contactor	<p>After triggering of the contactor, the control system did not receive the expected response confirming that the contactor was activated.</p> <p>Acknowledge the alarm and restart the machine. If this does not work and the alarm is repeated, please contact authorized service technician.</p>
Regeneration Air Inlet Hatch	<p>Open regeneration air inlet hatch and the alarm will automatically be reset. If the alarm was triggered during operation, the machine will also resume operation.</p> <p>If it is open and this false alarm is repeated or constant, the alarm can be temporarily deactivated allowing use of the machine while waiting for contacted authorized service technician to arrive. See Admin menu and Alarm control function section for further information.</p>
Regeneration Heater Contactor	<p>After triggering of the contactor, the control system did not receive the expected response confirming that the contactor was activated.</p> <p>Acknowledge the alarm and restart the machine. If this does not work and the alarm is repeated, please contact authorized service technician.</p>

<p>Regeneration Heater overheated</p>	<p>The likely cause of this is that the machine was not allowed to cool down before the power was connected after previous work or that, while the machine has been operating, the regeneration air flow has been insufficient.</p> <p>Please, let the machine cool down and then open the rear door. Reset the overheat protection by pushing all three red buttons on the side of the Regeneration Heater using a pen or similar object.</p>  <p>If the heater has reached a low enough temperature and the button is pushed deep enough, a mechanical click sound will be heard from the overheat protection. If not, wait for the heater to cool down further and try again.</p> <p>Check and, if necessary, replace dry air filter. Check that, if it is used, the dry air hose is not squeezed and that there is nothing else hindering the air flow through it.</p> <p>If the machine is used outdoors in sub temperatures, there cause of the problems might be ice that has formed in the heat exchanger, possibly both inside it and by the dry air filter. In these situations, open bypass hatch slightly.</p> <p>Regardless of situation, at restart, verify that the the wet air volume does reach up to the vicinity of 600m³ /hr.</p>
<p>Regeneration Heater not operating</p>	<p>Close rear doors and the alarm will automatically be reset. If the alarm was triggered during operation, the machine will also resume operation.</p> <p>If they are closed and this false alarm is repeated or constant, the alarm can be temporarily deactivated allowing use of the machine while waiting for contacted authorized service technician to arrive. See Admin menu and Alarm control function section for further information.</p>
<p>Rotor Belt Failure</p>	<p>The control system has not been able to detect rotor rotation. Open rear door and inspect whether the rotor is rotating or not. The rotor shall rotate as soon as the machine is powered and the mains power switch is turned on.</p> <p>If the rotor is not rotating, contact authorized service technician to have the machine repaired. If the alarm is false and the rotor is indeed rotating, the alarm can be temporarily deactivated allowing use of the machine while waiting for contacted authorized service technician to arrive. See Admin menu and Alarm control function section for further information.</p>

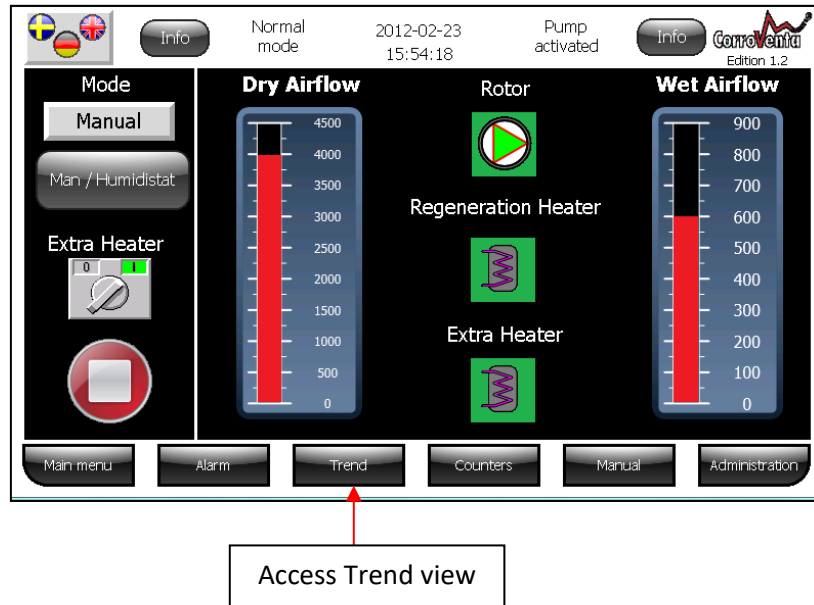
Rotor Motor Contactor	<p>After triggering of the contactor, the control system did not receive the expected response confirming that the contactor was activated.</p> <p>Acknowledge the alarm and restart the machine. If this does not work and the alarm is repeated, please contact authorized service technician.</p>
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Trend

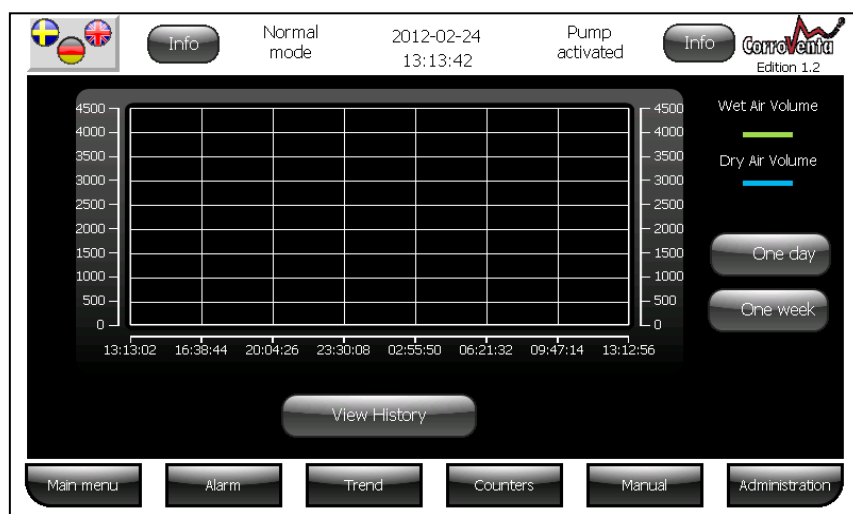
The A50 continuously logs the dry air and wet air flow, every ten minutes saving samples in a database storing the latest 14 days of operation.

The Trend presentation is accessible at all times, during operation as well as in stand-by. The presentation is accessed with the Trend button in the bottom segment of the display.



The Trend view default can be seen below although in this example there has not been any operation the last twenty four hours or two lines would have been seen in the graph, one green for wet air volume and one blue for dry air volume.

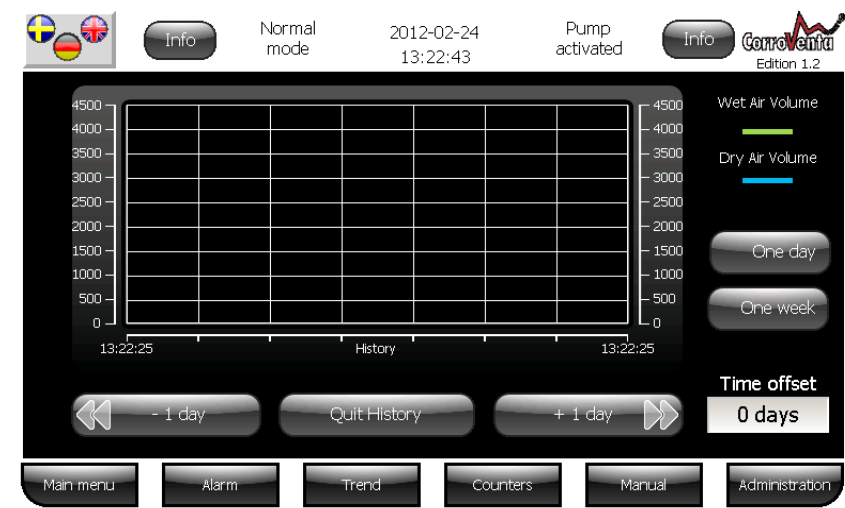
The default view presents the latest data and is updated once every ten minutes. With the two buttons on the right, the user can change the time span of the presentation. Default is 24 hours and in addition there is a seven day alternative.



With the View history button, the viewer and thus the graph turns to a presentation of historic data and the automatic updates are cancelled. With help of the lower flank buttons, the user can step forwards and backwards in time, having the indicator in the lower right corner presenting current time offset or, in other words, how many days old the currently presented data is.

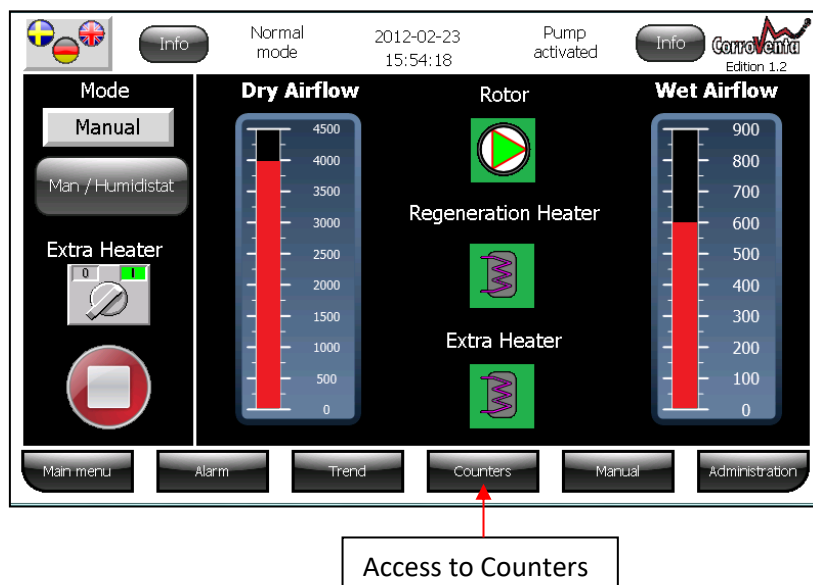
As when viewing current data, the two right buttons can be used to change the x-axis time span.

Pushing the Quit history button transfers the presentation back to display of the latest data stored.



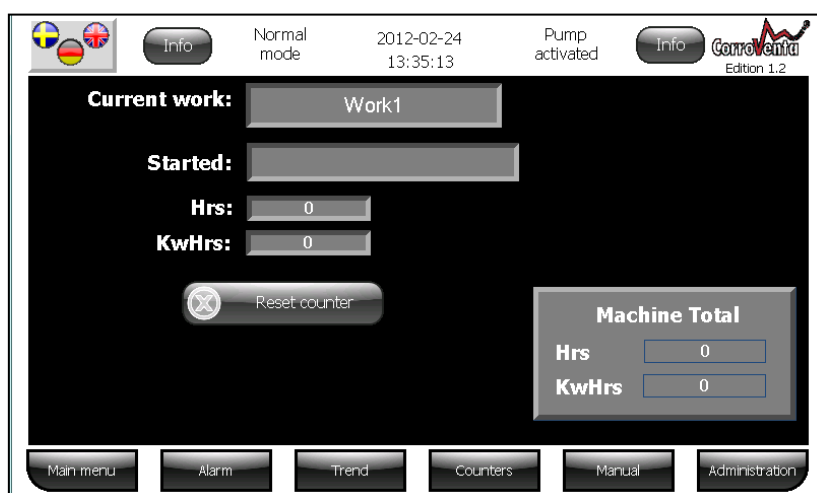
Counters

The A50TD2 implements hour and kWhr counters for machine life time which are non-resettable but also corresponding counters for current work which the user can reset and name as and when required. As an aide-memoire, the machine also stores the time and date of when the counters were reset.



The Counters view is, at all times, accessible through the Counters button in the bottom segment. As can be seen in the Installation section of this manual, the Start verification view that is presented when the machine is started does also provide the user with the option of resetting and naming the work counter.

The Counters view looks as depicted below where resettable work counter data is presented in the upper left section and the non-resettable life time counters in the lower right corner.



Pushing the Reset Counter button presents the below screen where the user simply taps the text box to edit the name. Doing so automatically presents a keyboard on the display and when correct name is typed in the window, the name is stored by push of enter. The editing of the name is entirely optional and if the below screen was presented due to a mistake, it can be escaped with corresponding button whereby the counters will continue from their current position.

Start new work

Work1

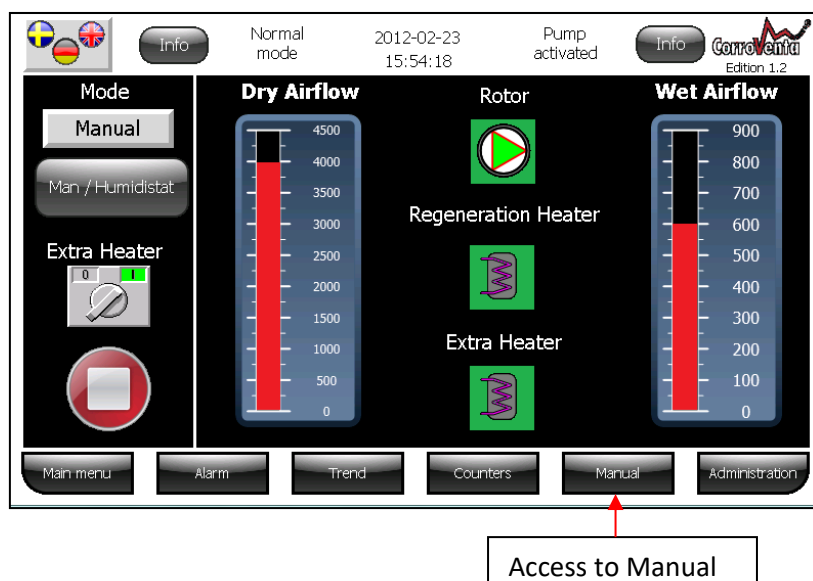
To edit the name for the new work, click on textbox above.

OK

Escape

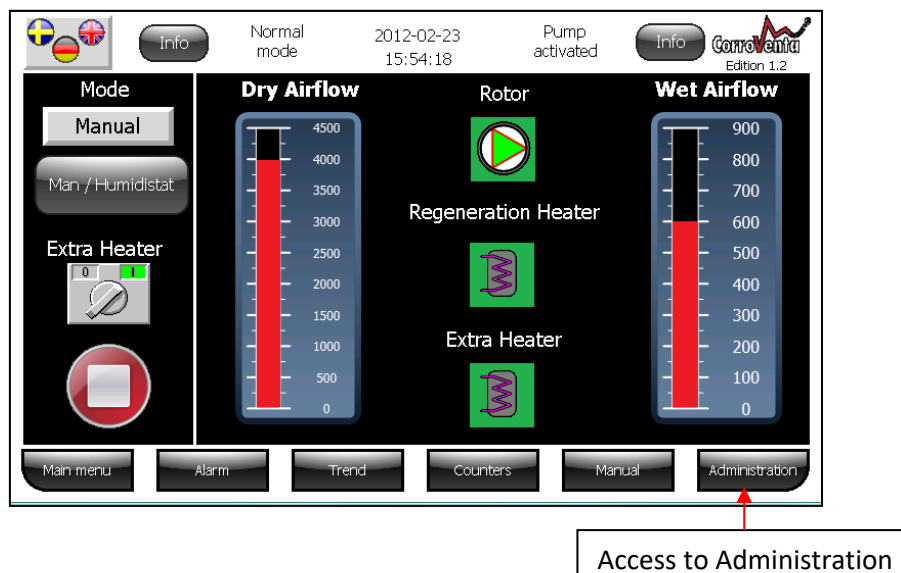
Manual

The Manual view of the MMI gives access to a small subset, a derivative, of the information provided with this manual. Although it does not replace this manual, at times it might still provide some useful input to the operation of the machine.

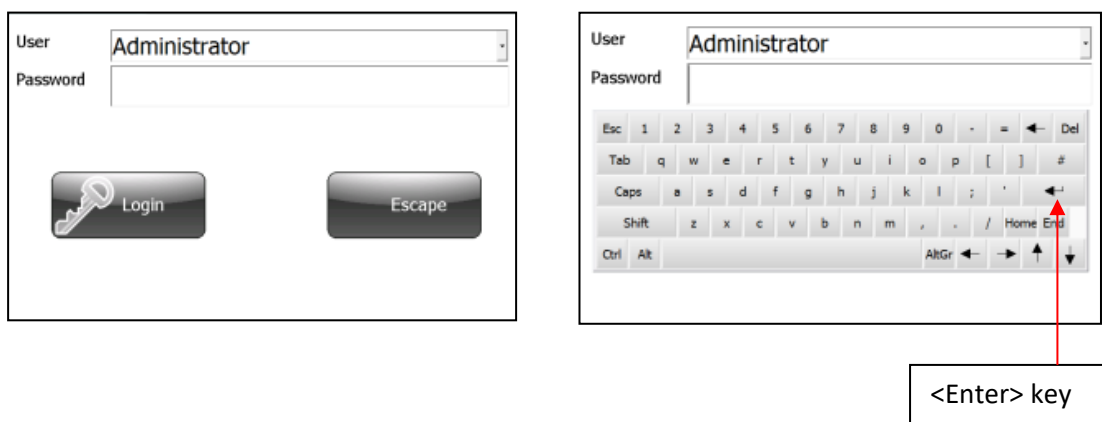


Administration

The Administration view gives access to configuration of the machine and also functions for more advanced trouble shooting. As this is not necessary for normal operation of the machine, the menu is password protected preventing accidental or inadvertent changes.

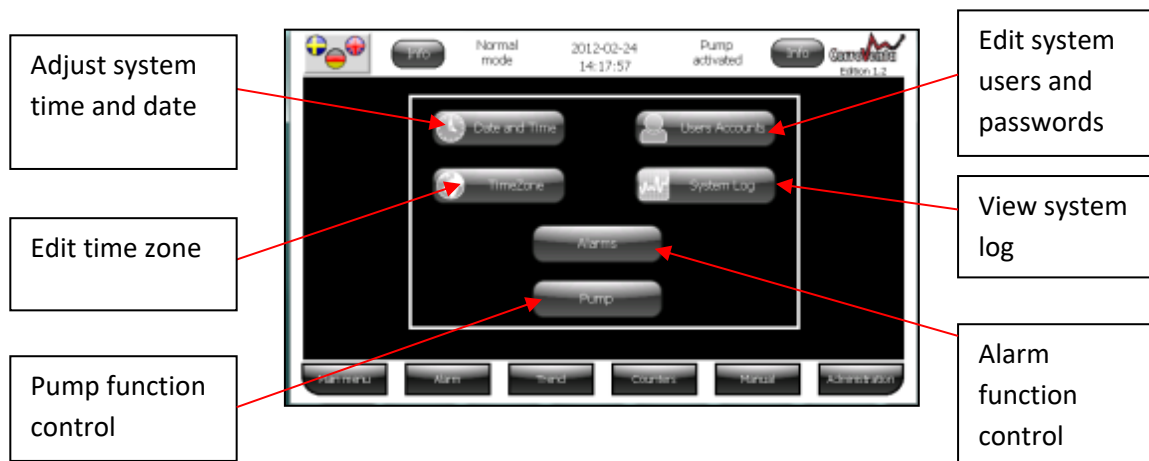


Pushing the Administration button, a login screen is presented where the user simply taps the Password textbox to have a keyboard presented. To enter Administration, type the password minding lower case and upper case letters, push enter whereby the keyboard disappears and then push Login. To type upper case letters, push <Caps>.



Successful login presents the below screen. The adjustment of time and date, time zone and users are functions familiar to all users of PCs. They are provided in standard windows format.

The log viewer is added to assist in more advanced trouble shooting. Important events, changes in settings etc, in the system are logged in a database with time and date and can therefore, at times, shed useful light on the sequence of events.



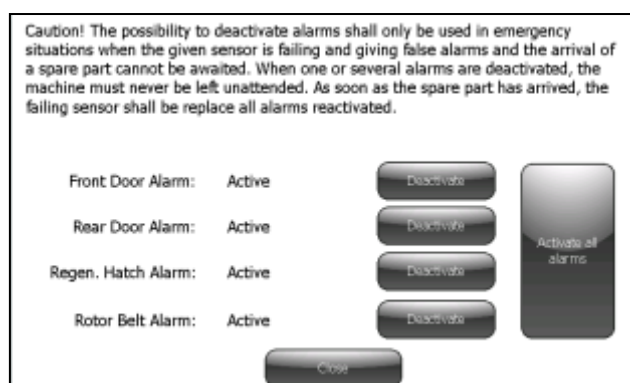
Alarm function control

The Alarm function control is implemented only to, in emergency situations, allow continued operation while awaiting repair of failing sensor(s) giving false alarms.

If for instance, the rear door sensor fails and sends error signal although the door is indeed closed, the corresponding alarm can be temporarily deactivated. The deactivation of an alarm will set the system in emergency mode, shown in the upper section of the display and a system in this mode must never be left unattended. The failing sensor(s) shall be replaced as soon as possible and the alarm(s) thereafter immediately reactivated.



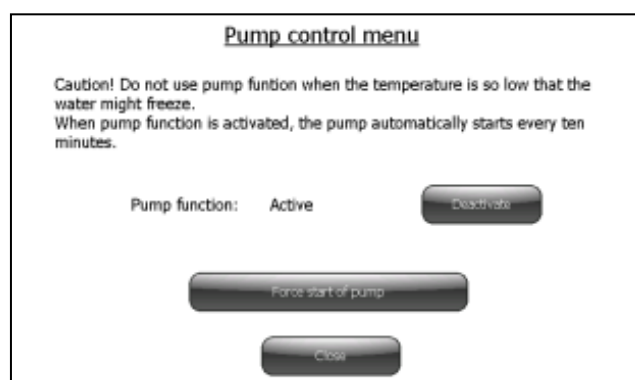
When in emergency mode, the machine must never be left operating unattended.



Pump function control

With pump function activated which is the normal status, the built-in condensate pump starts automatically every ten minutes and as a last step in the shut-down and cooling phase.

As the pump can be damaged by ice when used in very low temperatures, the pump function can be deactivated. The pump function control screen also implements a forced start of the pump. Pushing that button starts the pump in the same way as the automatic process normally does. The pump is initiated by the control system but the deactivation of it is implemented with the pump itself, triggered when there is no more water entering the system.



Maintenance and service

Filter replacement

In order to secure and maintain correct air flows through the A50 TD2, the process air filter and the regeneration air filter are to be replaced regularly, suitably before each new installation. Depending on the ambient environment, the filters might have to be replaced even more often.



Spare filters are easily stored on the inside of the front depicted above.



right door as

Condensate pump impeller, replacement

If the pump is activated regularly, every ten minutes, but is still does not produce any water it might have a failing impeller. The impeller is easily replaced, using no special tools, in accordance with the following instructions.

1. Loosen the three screws on the pump top, take off the lid and remove the broken impeller.



Pump house lid
held in place by
three screws

2. Clean the inside of the pump house from any remaining pieces of the impeller and dirt that has been gathered.
3. Proceed with installation of the new impeller, observing the instructions of the manual delivered with the spare impeller. Only use original spare parts provided by Corroventa.



Rotor cleaning

Over time, although the A50TD2 is equipped with both dry air and wet air filter, the rotor will collect some dust which decreases the drying capacity. Normally, depending on user profile, rotor cleaning should be performed once or twice a year. If the A50TD2 is used in very dirty environments, a more frequent cleaning is encouraged to maintain optimum performance through all operation of the machine.



Always use protective mask when cleaning the A50TD2 rotor to prevent injury to eyes and lungs.



Observe that cleaning the A50TD2 can potentially release dust in the surrounding air. Choose suitable location for cleaning and observe national and local environmental regulations.

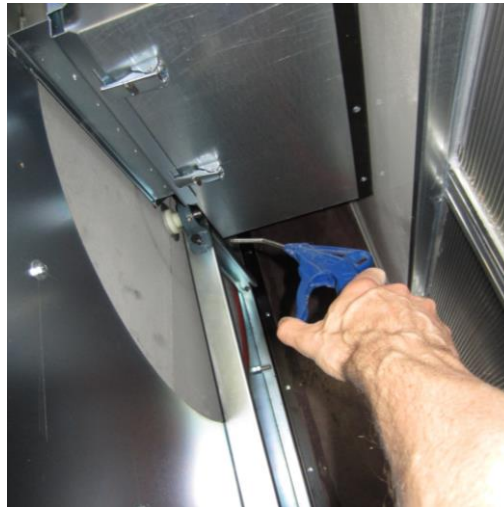
Cleaning procedure:

1. On suitable location, with power disconnected, parking brake applied and rear stabilizer lowered, open the rear doors and enter the A50TD2 to release the roof hatch lock by the ceiling above the rotor.



2. Close rear doors and, if applicable due to location and environmental regulations, position filter assembly by the dry air outlet to collect the dust that will be released during the cleaning.
3. Open the roof hatch as depicted above. Turn the mains power switch to activate the A50TD2 and start the machine as for normal operation.
4. Position suitable, stable pallet by the A50TD2, below the roof hatch on the power cabinet side to reach the rotor through the hatch.

5. While wearing protective mask, use pressurized air to clean the rotor as depicted below. Be careful not to touch the rotor and blow from the grey side, the front side of the rotor. Work methodically, cover the entire surface and observe that the rotation is slow why it takes a few minutes to clean the entire rotor.



6. Stop, shut-down the machine, turn the mains power switch off and disconnect the power cable.
7. If applicable, remove the filter assembly and open the rear doors.
8. Again wearing protective mask, clean the interior using suitable vacuum cleaner.



9. Replace both dry air and wet air filter and the cleaning is completed.

Accessories and consumables

The following articles are available as accessories and consumables to the A50 TD2:

Article number	Name
01100	Humidistat, HR1-5
	Process air filter
	Regeneration Air Filter

Fault finding

The alarms and the trouble shooting of them are described in Alarm information – Trouble-shooting guidance at page 15.

Symptom	Probable cause	Action
The condensate pump does not evacuate the water	<p>The pump function might have been deactivated in the administration menu. The current status, on or off, is visible at the top of the default/main view of the touch panel.</p> <p>If the machine is used outdoors and the temperature is below the freezing point, ice might be blocking the pump.</p> <p>The impeller of the pump can be damaged.</p>	<p>Activate pump function through the Administration menu.</p> <p>If the pump is frozen, use the drainage at the bottom of the heat exchanger, reachable from the front left corner of the trailer, to evacuate the water.</p> <p>If the pump is believed to have failed, replace the impeller in accordance with the instructions of this manual. Use the drainage until this repair can be undertaken.</p>
The machine does not start at all when the power is connected and the main power switch activated. The touch screen is black.	<p>There is an error with the mains power supply. One or several phases are missing.</p> <p>There is an error with the A50TD.</p>	<p>Check power cable and power outlet used, relevant fuses and ground fault circuit interrupters to make sure that the mains power supply is in order. Naturally, the control system of the A50 is supplied by one of the phases and if that phase is failing, the control system will not start.</p> <p>If the above has not solved the problem, please turn mains power off, disconnect the power cable and open the cabinet. Check that none of the two ground fault circuit breakers are tripped. These are located on the first row, the first and main one to the right of the mains power switch. Also check that none of the fuses in the second row are tripped, that they are all red.</p> <p>If any of the above had happened and is repeated at next start-up, please contact authorized service technician.</p>

Symptom	Probable cause	Action
The machine overheats and shuts down.	<p>The air flow through the machine is obstructed. One of the hoses used can be squeezed or the filters clogged.</p> <p>If the machine is used outdoors and the temperature is very low, several degrees Centigrade below zero, ice can have formed in the heat exchanger by the process air inlet.</p>	<p>Check that the air flows are unobstructed, that the dry air outlet lid is removed and that the hoses used are not squeezed or jammed by foreign objects. Check that the filters are clean, both the regeneration air filter and the process air filter. Replace if necessary.</p> <p>If not already done, reset the mechanical overheat protection as instructed with the Alarm info screen.</p> <p>Start the machine and verify that the dry air flow is somewhere in the region of 3500 m3 or higher and that the wet air flow is close to 600 m3. Please note that the wet air volume rises slowly after start, it might take up to two minutes before the correct level is reached.</p> <p>If the temperature is such that ice can have formed in the heat exchanger by the process air inlet and the wet air volume is still too low, proceed as follows. Open the bypass hatch reachable through the wet air outlet by the trailer floor behind the left front door. Loosen the two knobs securing the hatch by turning them anti-clockwise, push the hatch upwards a few centimeters and then secure it in its new position by tightening the knobs. Wait two minutes and observe the new wet air flow. If necessary, reiterate the process, adjusting the hatch and observing the flow, until correct flow is reached.</p> <p>If the above has not solved the problem, please contact authorized service technician.</p>

Technical data

Dry air volume (m ³ /hr)	4000
Drying capacity at 20°C, 80% RH (liters/day)	500
Power connection, main	3 ~ 400V, 32A
Power connection, extra heater	3 ~ 400V, 32A
Rated Power, Dehumidification/regeneration	20kW
Rated Power, Extra heater	12.5kW
Height x width x length (cm)	410 x 200x 190
Weight, kg	1090 kg



DO YOU HAVE QUESTIONS OR NEED HELP?

*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.*

Corroventa develops, manufactures, sells and rents high quality products for dealing with water damage, moisture, odours and radon. We are one of the market leaders and specialists in innovation within the industry. Our products are compact, effective, ergonomic and energy efficient. In emergency situations and during flooding, Corroventa's customers have access to one of the largest rental parks in Europe. All our products are manufactured in Bankeryd, Sweden.

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