ORCON EEN HELDERE KIJK OP VENTILATIE

Installation and user manual

WTU-EC-E / IE / TA

Heat recovery unit with EC motors,
Regin controller and external display

CE

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WARNINGS

- Only authorised technicians are allowed to disassemble and repair this product.
- Improper handling may result in fire, electric shock or injury.
- Do not install this product in a refrigerated warehouse, swimming pool or other location where temperature and humidity are significantly different from normal indoor air. Disregarding this warning may cause the unit to malfunction.
- Do not install this product where it will be directly exposed to rain.
- Do not install this product in an area where acid, alkaline vapour or vapours of organic solvents, paint or other toxic gas are present, gas containing corrosive components or high concentrations of oily smoke are present. Disregarding this warning may lead not only to malfunction but also to fire or loss of power.
- Install the WTU in an environment where the temperature is between -10 and +40 degrees Celsius and the relative humidity is less than 60%.
- If condensation occurs, preheat the fresh air with a CBRF duct heater. Always use a pre-heater with the WTU-EC-TA series to prevent freezing in the heat exchanger in winter.
- Choose a suitable, solid place to install the product and do so carefully and safely.
- The external ducts must be installed with a slope to the outside and correctly insulated. (Rainwater can cause short circuits or other damage).
- Gloves must be worn during installation. Ignoring this warning may lead to injury.
- Attach the product securely to the earth contact.
- When not using an earthed power cord, an isolating switch with a minimum gap of 3 mm between contacts must be used to safely disconnect the power supply.

Note: A system which is not installed in accordance with the installation and operating instructions is not covered by the guarantee.

2. Commissioning and checklist

Commissioning by Orcon

Orcon is happy to assist you in commissioning the WTU. After the installation has been approved by Orcon, you will receive an additional one-year warranty. Prior to commissioning and in the event of a malfunction, you should check the following points.

Check the installation for the following points:

- The WTU and all external equipment have been installed in accordance with the installation instructions (see pages 10 to 12).
- The cables of the WTU are correctly connected (see pages13to 15).
- The WTU is powered and earthed.
- The power cables have the correct diameter.
- An isolating switch is fitted.
- The outside air and exhaust air ducts are insulated.
- The silencers are installed and the duct system is correctly connected to the WTU.
- The diameter of the air ducts must be equal to or larger than the connection flanges of the WTU.
- The air filters are clean and the air flow is not blocked.
- The outside air intake is located at a sufficient distance from contaminated air (kitchen exhaust, boiler and fireplaces, etc.).
- There is enough space to carry out servicing. Check that the heat exchanger, filters and motors (via the side and bottom hatches) are accessible and can be replaced if necessary.

Only for the TA series:

- A condensate drain is connected to the unit and that it is not blocked. Make sure that the reinforced hose is placed at an angle.
- A CBRF preheater is installed.

Check whether the following data are available (or possibly set):

- A weekly schedule with the set normal and reduced fan speeds.
- Any desired configurations, such as temperature control functions, fan control, external control functions, etc., can be

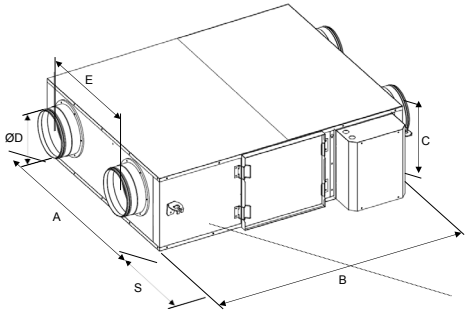
carried out.

3. Technical specifications (WTU-EC-E / IE series)

The table below shows the specifications according to EU Regulation 1253/2014.

		WTU 250-EC-E/IE	WTU 600-EC-E/IE	WTU 800-EC-E/IE	WTU 1000-EC-E/IE	WTU 1500-EC-E/IE	WTU 2000-EC-E/IE
Manufacturer		Orcon					
Typology		Non-residential ventilation unit (NRVE); Two-way ventilation unit (TVE)					
Drive		Variable					
Thermal efficiency [1]	%	75	73	73	76	75	75
Nominal flow rate @ 100Pa	m3/h	200	440	800	1000	1200	1700
Maximum flow rate @ 0Pa	m3/h	374	760	921	1425	2280	2780
Electrical input power at nominal air volume	W	44	97	244	256	351	462
SFPint [1]	W/(m3/s)	4.3	6.3	8.2	5.3	8.8	7.3
Design flow rate	m/s	0.6	0.8	1.1	1	1.2	1.3
Decrease of internal pressure of ventilation parts (Ps,int)	Pa	67	113	240	164	226	218
Static efficiency tower (EU) No 327/2001	%	41	44	50	49	54	58
External leakage	%	2.3	1.9	0.4	0.2	1.3	0.6
Sound power level of WTU-E cabinet	(LWA)	38	46	45	43	48	46
Energy efficiency filters		A+					
Warning signal filters		On the display					
Service and downloads		www.orcon.nl/service					

[1] Measured at balanced volumetric flow according to EN 308



4.Dimensions (WTU-EC-E / IE series)

WTU-250-EC-E	750	907	296	160	404	700	34
WTU-600-EC-E	922	1130	344	200	499	700	46
WTU-800-EC-E	1014	1214	410	250	589	760	51
WTU-1000-EC-E	1294	1606	410	300	719	760	79
WTU-1500-EC-E	1128	1807	552	355	623	800	97
WTU-2000-EC-E	1428	1807	552	355	921	800	106

All dimensions are in millimetres.

*The space needed to carry out maintenance is indicated by size S.

WTU-250-EC-IE	808	956	358	160	404	700	52
WTU-600-EC-IE	981	1186	416	200	505	700	83
WTU-800-EC-IE	1071	1264	472	250	590	760	97
WTU-1000-EC-IE	1351	1657	472	300	720	760	135
WTU-1500-EC-IE	1185	1856	614	355	623	800	164
WTU-2000-EC-IE	1485	1856	614	355	921	800	179

All dimensions are in millimetres.

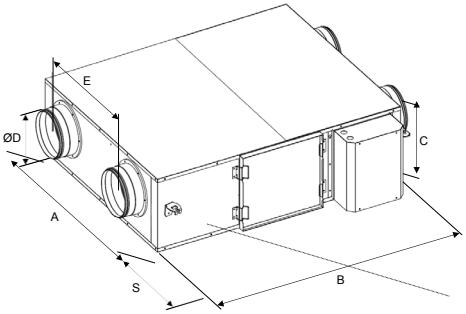
* The space required for maintenance is indicated by size S.

5. Technical specifications (WTU-EC-TA series)

The table below shows the specifications according to EU Regulation 1253/2014.

		WTU 600-EC-TA	WTU 800-EC-TA	WTU 1000-EC-TA
Manufacturer		Orcon		
Typology		Non-residential ventilation unit (NRVE); Two-way ventilation unit (TVE)		
Drive		Variable		
Thermal efficiency [1]	%	82	82	82
Nominal flow rate @ 100Pa	m3/h	500	750	1000
Maximum nominal @ 0 Pa	m3/h	760	869	1288
Electrical input power at nominal air volume	W	144	242	277
SFPint [1]	W/(m3/s)	7.4	9.6	7.0
Design flow rate	m/s	1.3	1.4	1.5
Decrease of internal pressure of ventilation parts (Ps,int)	Pa	133	187	143
Static efficiency of ventilators (EU) No 327/2001	%	45	50	49
External leakage	%	0.1	0.2	0.3
Internal leakage	%	1.9	1.6	2.3
Cabinet sound power level	(LWA)	44	48	47
Energy efficiency filters		A+		
Warning signal filters		On the display		
Service and downloads		www.orcon.nl/service		

[1] Measured at balanced volumetric flow according to EN 308

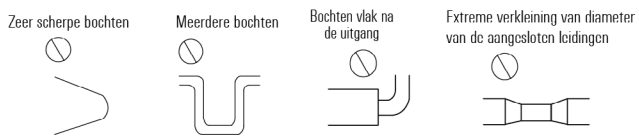


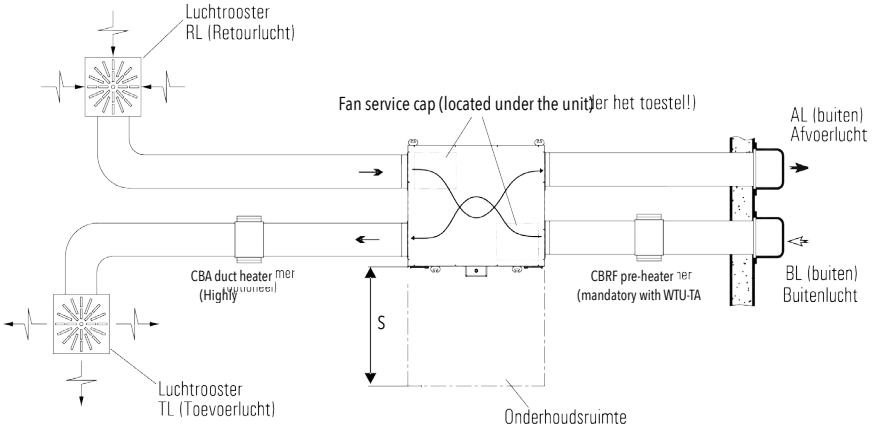
6. Dimensions (WTU-EC-TA series)

	A	B	C	D	E	S *	Weight (kg)
WTU-600-EC-TA	934	1325	355	200	499	700	64
WTU-800-EC-TA	1024	1387	400	250	589	760	71
WTU-1000-EC-TA	1304	1780	410	300	719	760	113

All dimensions are in millimetres.
* The space needed to carry out maintenance is indicated by size S.

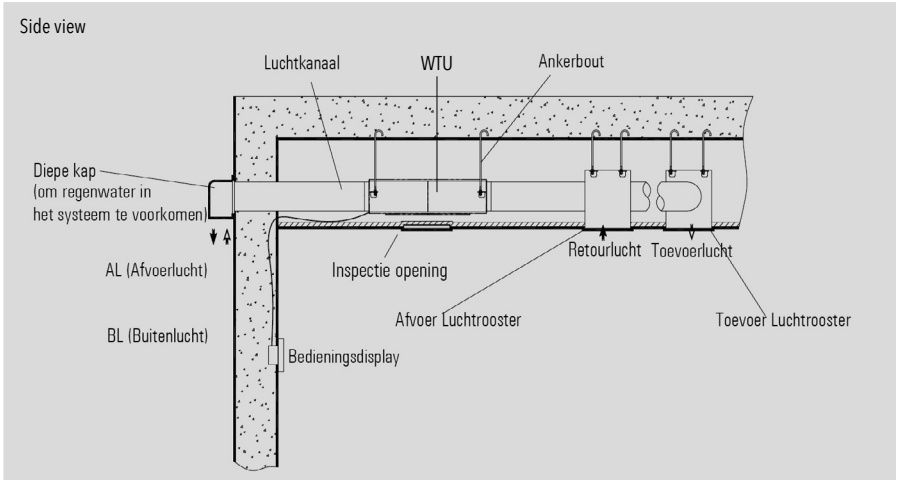
CAUTION
When installing the air ducts, avoid as far as possible the following situations:





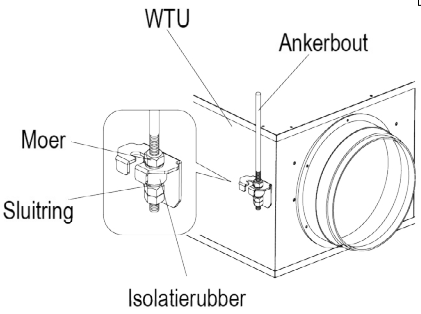
7. Installation

NOTE
- The value for S is given in sections 4 and 6.
- The access doors to the fans are located under the WTU. During installation, ensure that there is sufficient free space to remove the fans.
- Preferably position the supply air grilles and the return air grilles as far apart as possible so that the entire room is ventilated.
- Place control valves in the ducts if multiple extraction grilles are installed.
- All electrotechnical operations and connections must be carried out according to and comply with the legal requirements.



WARNING

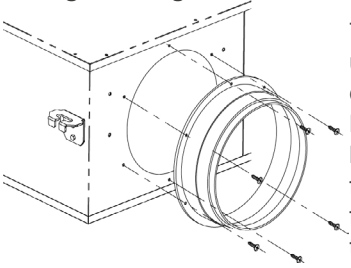
Check that no (sealant) residue is left in the WTU.



WARNING

Check the stability of the anchor bolt during installation.

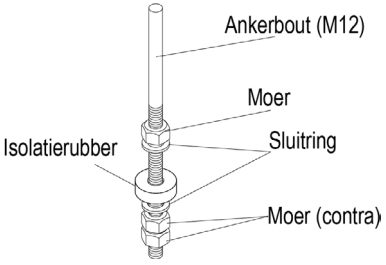
Attaching the flanges for the air ducts



The flanges of the air ducts are mounted upside down on delivery to protect them during transport.
Before installing the WTU, the flanges must be removed. Then apply sealant to the flange to prevent air leakage. After this, the flanges can be attached to the housing of the WTU by using the
using the same screws and the existing screw holes.

Prepare the threaded endsInstallation of the WTU

Hang the WTU with the suspension brackets on the anchor bolts and fasten them so that the WTU is installed horizontally. Lock the lower nut with a second nut to prevent it from coming loose.

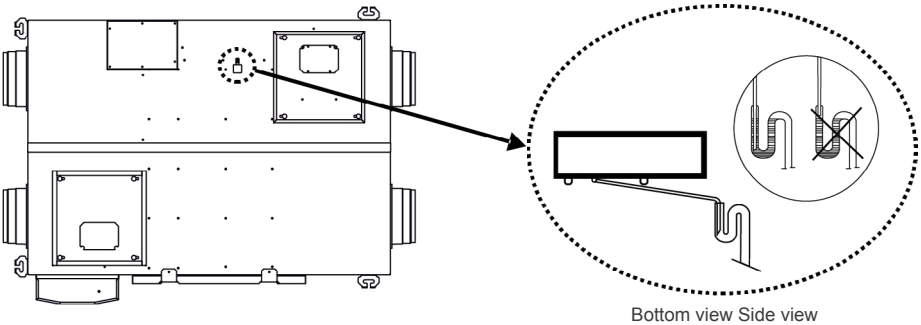


Connecting condensate drain (TA series)

The condensation water must be drained off to prevent water damage to the unit or ducts. The hose connection is located underneath the unit. A reinforced hose with an internal diameter of 10 mm and a maximum length of 1.5 m must be connected to this. The condensation water must be drained via a siphon into the sewerage system, see diagram below.
Then fit the condensation drain hose into the hose connection; the condensation drain must not be kinked. Pour water into the drip tray to create a water trap and also check the condensate drain for leaks.

Points of attention:

1. A hose clamp should be used so that the drain can be easily dismantled and cleaned later.
2. The drain hose must be placed at an angle and may not kink, so that the water can drain off easily. It is absolutely forbidden to connect the hose directly to the sewage system (because of odours).



Bottom view Side view

8. Connecting accessories

All electrotechnical operations and connections must be carried out according to and comply with the legal requirements.

Connecting the CO_2 sensor (WTU-EC-E/IE/TA)

The units of the WTU-EC-E/IE series can be controlled by an air quality sensor. This can be done via a CO_2 room sensor or a CO_2 channel sensor.

CO_2 room sensor
Connect the 0-10V signal from the sensor (terminal 8) to terminal 2 of the WTU terminal strip. Connect terminal 7 (GND) to terminal 3 (AGND) of the WTU terminal strip.
Always use a separate switched-mode power supply for the room sensor.
(Article no: 17700120)

CO_2 channel sensor
The CO_2 channel sensor can be connected directly to the WTU terminal strip. Connect the brown wire (0-10V) to terminal 2, the red wire (+24V) to terminal 5 and connect the black wire (GND) to terminal 3 (AGND) of the WTU terminal strip.

After connecting the CO_2 sensor, it must be configured in the controller (see page21).

Connecting MTV-3 switch

The devices can be controlled by an MTV-3 switch by means of a 0-10V signal.
The MTV-3 can be connected to terminal 1 (+10 Volt), terminal 2 (0-10v) and with terminal 3 (AGND).
After connection, the MTV-3 must be activated as CO_2 sensor in the controller
(see page 22).

Connecting CBA reheater to WTU-EC-E/IE/TA

The electric duct heater can be installed horizontally in any position except for the position where the terminal box faces downwards. In case of a vertical installation, the air flow should be directed upwards. When installing the CBA duct heater, observe the minimum distance from the WTU
(at least 2x duct diameter). The temperature sensor should be mounted at a distance of at least three times the duct diameter after the reheater.

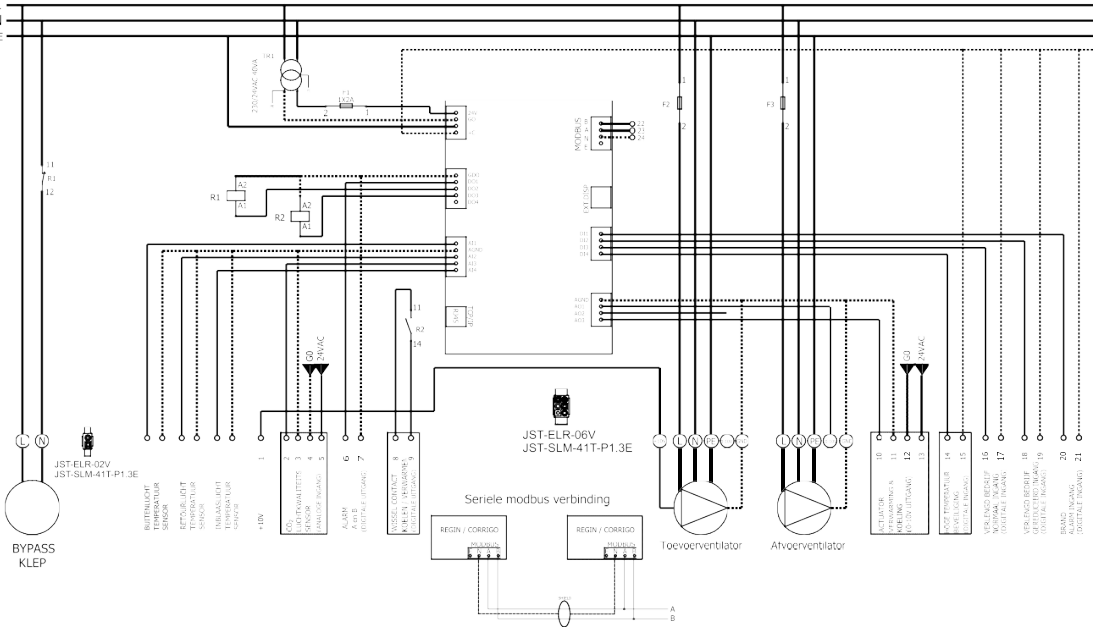
The reheater is controlled by the WTU with a 0-10V signal. Therefore, terminal 9 (-) of the CBA must be connected to terminal 11 (GND) of the WTU and terminal 10 (+) of the CBA to terminal 10 (0-10V) of the WTU.

When connecting the CBA reheater, the temperature sensor supplied with it must also be connected to the WTU controller. The temperature sensor must be connected directly to Analog Input 4 (AI4/contact 35) and Analog Earth (AGND/contact 33) of the controller. The temperature sensor (supply air temperature sensor) connected to AI4 must first be disconnected from AI4. The AGND already connected on the controller should remain, the new sensor should be connected to the free AGND (contact 33).

After connecting the CBA reheater, it must be configured in the controller (see page 22).

Connecting to Building Management System (GBS/BMS)

The WTU can communicate with a Building Management System according to a MOD-bus or BAC-net protocol. For this, a TCP/IP or RS485 cable must be laid between the WTU and the Building Management System.
For the most up-to-date bus list see www.orcon.nl/BMS



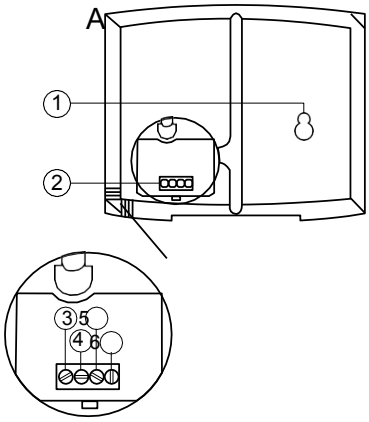
Note: The connections shown in a box are optional.

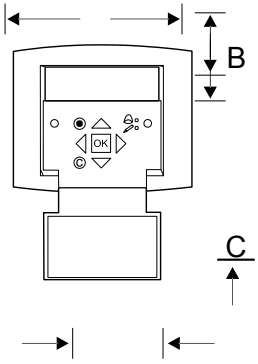
Electrical Connections - WTU-EC-E/IE/TA

9. Display

Installing the operating display

The control panel is supplied with a 10m cable connected to the Regin controller. If required, the 10m cable can be replaced by a cable up to 100m long. Determine a suitable place for mounting the control panel.
control panel. If necessary, drill two holes in the wall to hang the control panel (centre-to-centre: 60 mm).



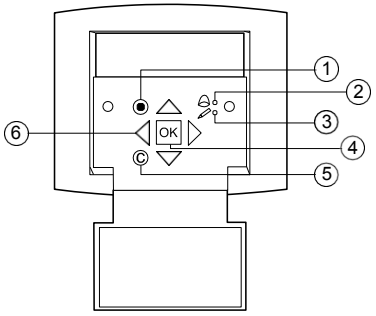


Position description: 1 Mounting holes
2.Terminal block
3.Connection - brown cable 4 Connection - yellow cable
5 Connection - white cable 6 Connection - black cable

Control panel dimensions

A	B	C	D	E
115	94.0	26.0	60.0	50.5

Dimensions in mm



Explanation Control display

For a more detailed description of how to operate the controller in the WTU, download the "Corrigo User Manual.pdf" at www.orcon.nl/wtu-etool.

1	Alarm button: gives access to the list of alarm messages
2	Alarm LED: indicates an alarm message by flashing red.
3	Input LED: indicates by flashing yellow that parameters can be set or changed.
4	OK button: Press this button to change or set parameters where possible. Also used to switch between parameters to be set in a dialogue box.
5	Cancel button: Used to cancel a change and return to the initial setting.
6	Left/Right & Up/Down Arrows: used to move up, down, left and right through the menu structure. The up/down arrows are also used to increase/decrease values when setting or changing parameters.

Running through menus

The start screen is the beginning of the menu structure. You can use the up and down arrows to scroll through the menu options. Sometimes a menu item has a submenu. This is indicated by an arrow on the right of the screen. Clicking on the button with the right arrow opens the submenu. (You must have the appropriate rights to do this). By clicking on the left arrow, one returns to the previous menu level.

Start settings

When starting the WTU for the first time, the controller starts a program for setting the following settings once:
Step 1Language,
Step 2 Return air temperature set point
, Step 3 Time & date and
Step 4weekly schedule for setting normal and reduced ventilation.

The following applies to all programmes:
• Press OK to select a parameter.
• Use the up/down arrows to change the parameter.
• Press OK to confirm a changed parameter.

Step 1	Select the desired "Language".	**Select language > Dutch** Go to the next level by clicking on the 'down' arrow.
Step 2	Set the desired return air temperature (see the explanation 'Return air temperature' below). This is 21 °C as standard (log on to service level, code 2222, to change default setting).	**Return air temp.** **Measured: ...°C** **Desired: 21 °C**
Step 3	Check that the correct time and date are displayed. If this is not the case, you must use the Change settings.	**Time: ...** **Date: ...** **Weekday: ...**
Step 4	Weekly schedule	**Full speed**
	a. Set the weekly schedule (Monday to Friday) with the periods when the WTU is at normal speed must be ventilated. There can be 2 periods per day be set.	**Monday -> Friday** **Per. 1: 09:00 - 17:00** **Per. 2: 00:00 - 00:00**
	b. Set the weekend and holiday schedule with the periods when the WTU is running at normal speed must be ventilated. There can be 2 periods per day be set.	**Full speed** **Saturday ->Holiday** **Per. 1: 00:00 - 00:00** **Per. 2: 00:00 - 00:00**

c. Set the weekly schedule (Monday to Friday)	**Half-turns**
with the periods when the WTU was on reduced	**Monday -> Friday**
speed must be ventilated. There can be 2 periods per	**Per. 1: 00:00 - 24:00**
day.	**Per. 2: 00:00 - 00:00**
d. Set the weekend and holiday schedule with the	**Half-turns**
periods when the WTU is running at reduced speed	**Saturday ->Holiday**
must be ventilated. There can be 2 periods per day	**Per. 1: 00:00 - 00:00**
be set.	**Per. 2: 00:00 - 00:00**

Step 5 Change'No' to 'Yes' to stop the wizard. **Stop the wizard?**

Yes

Return air temperature

As far as possible, the temperature is controlled on the basis of the measured return air temperature. The WTU can thus keep the room temperature as constant as possible even if, for example, there is a lot of warming in the room due to solar radiation (e.g. by sending the bypass open).

After completing the initial settings, you are logged in at the Operator level. In order to have more rights to change settings, you need to change to the Service level. See section 'Changing access rights'.

Changing access rights

By default, the WTU is operated with the rights of "Operator". If you want to make some changes, you have to log in as 'Service' or 'Admin'.
To do this, go to Access rights -> Login in the main menu.
Use the code 2222 to log on as Service, or code 1111 to log on as Admin.

Changing operating mode

After the unit has been started up, it will run in automatic mode. The unit will then follow the set timer programme or any linked CO_2 sensor. You can also switch the air conditioner manually 'Off' or 'On':

Step1Go to: 'Company mode' -> 'Company mode'

Step2Press "OK" to change the operating status.

Step3- Select "Auto" to ventilate according to the timer program

- Select 'On' to ventilate continuously (outside of the timer programme)
- Select "Off" to switch off the WTU.

Activate MTV-3 switch

If an MTV-3 switch is connected, it must be configured as follows:

Step1Log in as Admin (code 1111)

Step2Go to 'Configuration -> Inputs/Outputs -> Analogue inputs -> AI3. Press OK.

Step3Change 'not used' to 'CO_2'.

Step4Go back to the 'Configuration' menu (press left arrow).

Step5Press the down arrow to go to the '$CO_{2/VOC}$' menu.

Step6Change 'Never' to 'Always' and 'Type' to 'Fan', 0 min run.

Step7Press the down arrow to set the ppm values: 1/2-turn = 0ppm
1/1 speed = 2000ppm
Difference = 30ppm

Step8Set the rotation speeds for the supply and exhaust fan (TV and AV) to reduced (15%) and normal (100%) (see Changing fan speeds).

Changing fan speeds

The percentage of the maximum running speed for the exhaust and supply air fans is set by default to 35% for reduced operation (1/2) and 90% for normal operation (1/1). You can change the control percentage per fan. To do so, log in as Service and go to: Air controls -> Extract fan (AV) or Supply fan (TV) -> Set the desired percentages.

Activate bypass

The bypass should be configured as follows:

Step1Log in as Admin (code 1111)

Step2Go to: 'Configuration -> "Wisselaar" -> "P1 WIssel".

Step3Go to 'Outdoor temp control for exchanger' and choose 'yes' to activate the bypass control.

Step4Go to "Start outdoor temp" and set the temperature below which the valve should open when there is a cooling demand. If the outdoor temperature rises above the selected value, the valve will close again.

Activate CO_2 sensor

If a CO_2 sensor is connected, it must be configured as follows:

Step1Log in as Admin (code 1111)

Step2Go to 'Configuration -> Inputs/Outputs -> Analogue inputs -> AI3. Press OK.

Step3Change 'not used' to 'CO_2'.

Step4Go back to the 'Configuration' menu.

Step5Press the down arrow to go to the 'CO_2/VOC' menu.

Step6Change 'Never' to 'Always' and 'Type' to 'Fan'.

Step7Press the down arrow to change the desired activation level.
Set the following parameters, for example:
1/2-tour: 500ppm
1/1-tour: 1100ppm
Difference:
160ppm*

The result of "1/2 turn" - "Difference" determines when the WTU stops ventilating. However, if a timer programme for reduced ventilation is also set, the WTU will continue to ventilate according to the reduced setting.

Activate CBA reheater or Hot/Cold water coil

Step 1

Step 2

Step 3

Step 4

Step 5

Step 6

Step 7

Step 8

Step 9

If a CBA reheater or hot/cold water coil is connected to the controller, it can be activated via the external display in the following way:

Go to 'Access' by clicking on the down arrow. Log in with

the code 1111 (ADMIN).

Go to 'Configuration' > 'Inputs and outputs'> 'Analogue

outputs'. Go to 'AO3' > Change 'not used' to 'Y1 heating'.

Return to the 'Configuration' menu.
Click on the down arrow and go to the 'Heating' menu. Change 'Not

used' to 'Electric'.

Return to the "Configuration" menu. Go to 'Control function' and press 'OK'. Select here 'Supply air control'.

Go to the 'Temperature' menu (via the main menu) and change the setpoint to the required supply air temperature, if necessary.

Activate summer night ventilation

This function is used during the hot summer period to cool the building at night with the colder outside air. For this, the 'Summer night ventilation' function must be set to 'Active' in the programme menu:

Step 1 Log in as Admin (code 1111)
Step 2 Go to: 'Configuration -> 'Z/N ventilation' -> 'ZNV active: No'.

Step 3 Change 'No' to 'Yes'.

Summer night ventilation will only be activated if the following starting conditions are met:

- Less than 4 days have passed since the WTU was last in operation.
- The outside temperature during the previous operating period was higher than a set limit (e.g. +22 °C).
- The current time is between two adjustable times (e.g. 00:00 and 07:00).

- The timer outputs for normal speed, extended run normal and external stop are off.
- During the recently started 24 hours, a time channel is on.

The WTU checks the night-time temperature (inside and outside temperature) for 3 minutes at the set starting time. If the above conditions are fulfilled, the summer night ventilation function is started.
If the conditions are not met, the WTU goes back into the off position.

Stop conditions:
- The outside temperature is above the set maximum value (e.g. +18 °C) or below the set minimum value (due to condensation risk, e.g. +10 °C).
- The room or return air temperature is below the set value (e.g. +18 °C).
- One of the timer outputs for normal speed, external stop or extended running time normal is on.

If the outside temperature falls below a selected value, the valve will always close.

Activating the DX battery

The DX battery is activated by adjusting the following settings:

Step 1 Go to 'Configuration' > 'Heating' and select 'Electric' Step 2 Go

to 'Configuration' > 'Cooler' and select 'DX'

Step 3 Go to 'Configuration' > 'Other parameters' > Split settings
Changer:0% at HCOut= 0%;
100% at HCOut = 100%
Heating: 0% at HCOut= 54%
100% at HCOut=100%
Cooling: 0% at HCOut= 30%
100% at HCOut= 0%

Step 4 Go to 'Configuration' > 'Cooling recovery' and select 'Yes'; set 'Cooling limit' = 2.0

Step 5 Go to 'Configuration' > 'In/Outputs' > 'Analogue Outputs > 'AO3' and select Y1 Heating/Y3 Cooling'.

10. Programming the controller via the laptop

The WTU controller can also be programmed with the laptop. The program "Corrigo E-tool for Windows" must be installed. It can be downloaded from: www.orcon.nl/wtu-etool.

The following describes how to connect the controller to a laptop and how to change some settings in the controller. To program the WTU, the laptop must be connected to the controller via a TCP/IP cable.

Figure 1

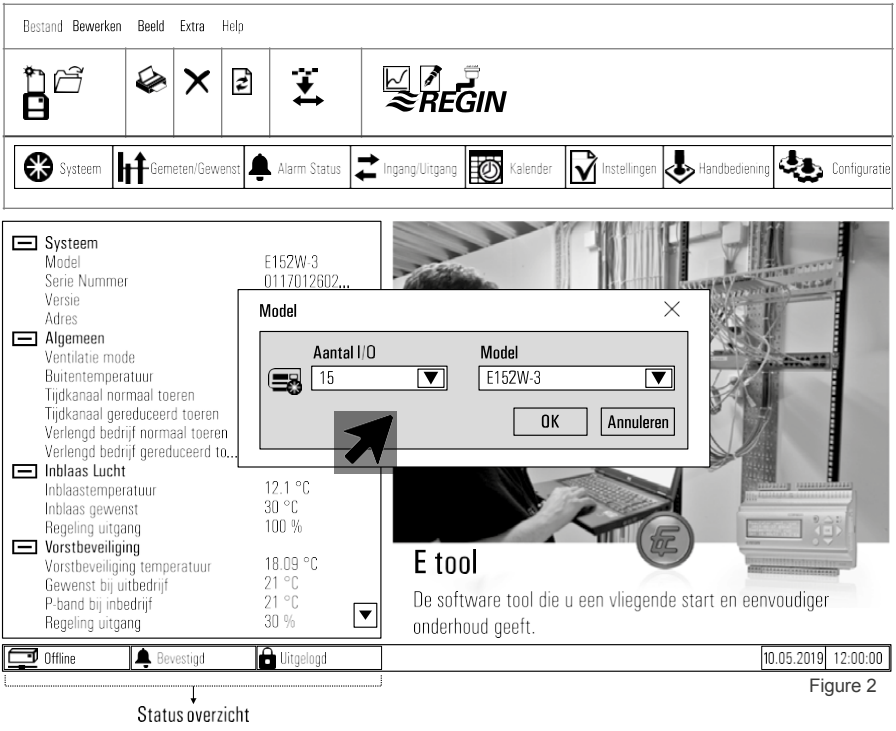


Figure 2

Open the 'Corrigo E-Tool' as shown in Figure 2.
Select the 'Number of I/O' of the controller and the 'Model'. Then click on the 'OK' button.

Online

Connecting to the controller

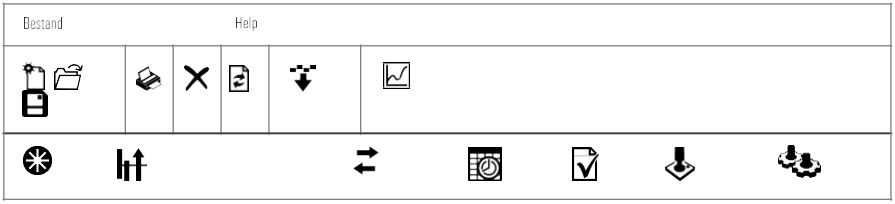


Figure 3

Press the symbol as shown in Figure 3

Select 'Use a TCP/IP port in this controller' and press 'Search' as shown in Figure 4.

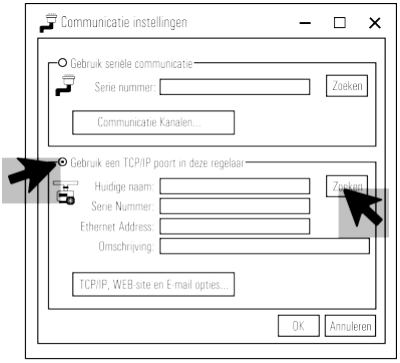


Figure 4

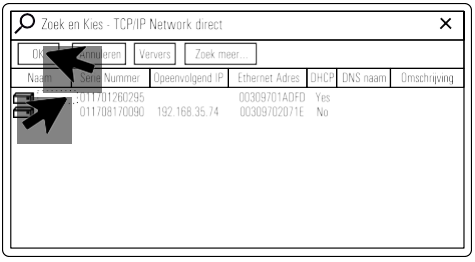


Figure 5

First select '' and then press 'OK' as shown in Figure 5.

Press 'OK' as shown in Figure 6. The controller is now connected. The status display on the initial screen of the 'Corrigo

E-tool' changed to as seen in Figure 7.

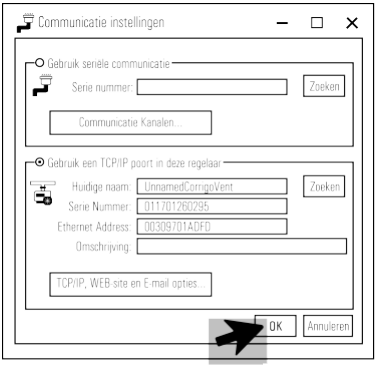
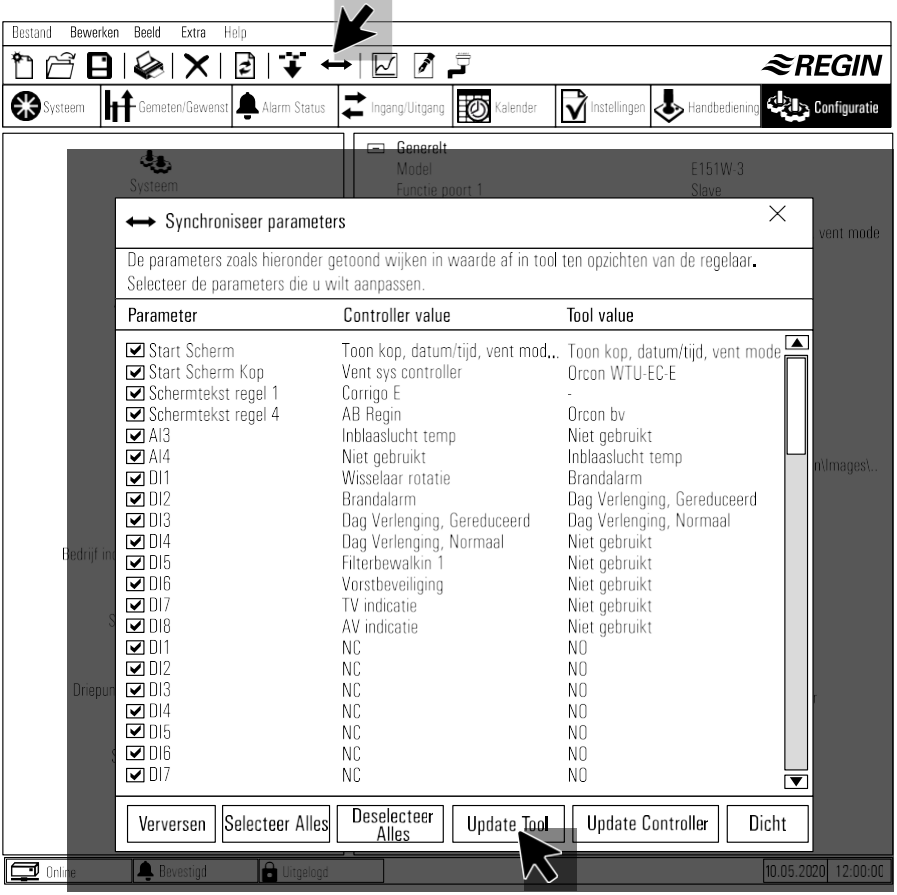


Figure 6



Synchronising parameters (Update Tool)
Figure 7

1. Click on ↔ 'synchronise'as shown in Figure 7 above. The 'synchronise parameters' menu will appear.
2. Click on 'Update Tool' to make the changes in the controller.
3. Enter the administrator password (1111) to change the settings. Then click on 'OK' to finish the procedure.

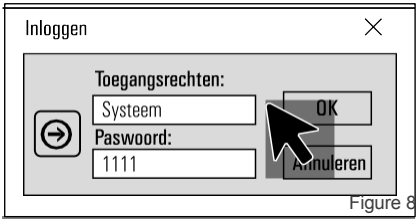
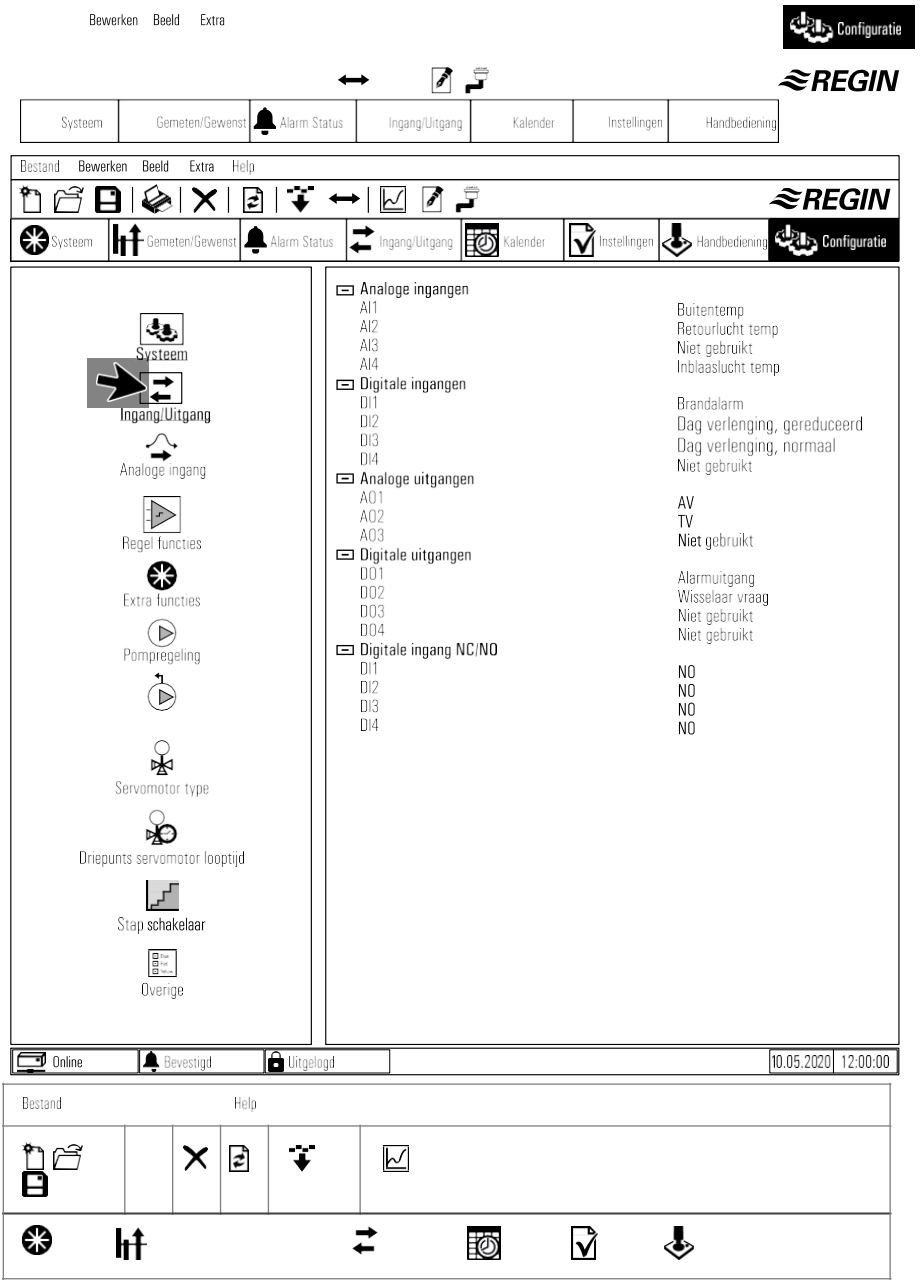


Figure 8



Configuring parameters

Figure 9

Click on 'Configuration' as shown in Figure 9. The 'System' menu will appear.
Figure 10

1. Now click on 'Input/Output' as shown on the left side of Figure 10. The 'Input/Output' menu will now appear on the right side of the screen.
2. By clicking on one of the possible inputs or outputs, a drop-down menu appears on the far right. A choice can then be made from the available options.

Configuring DX Battery (example)

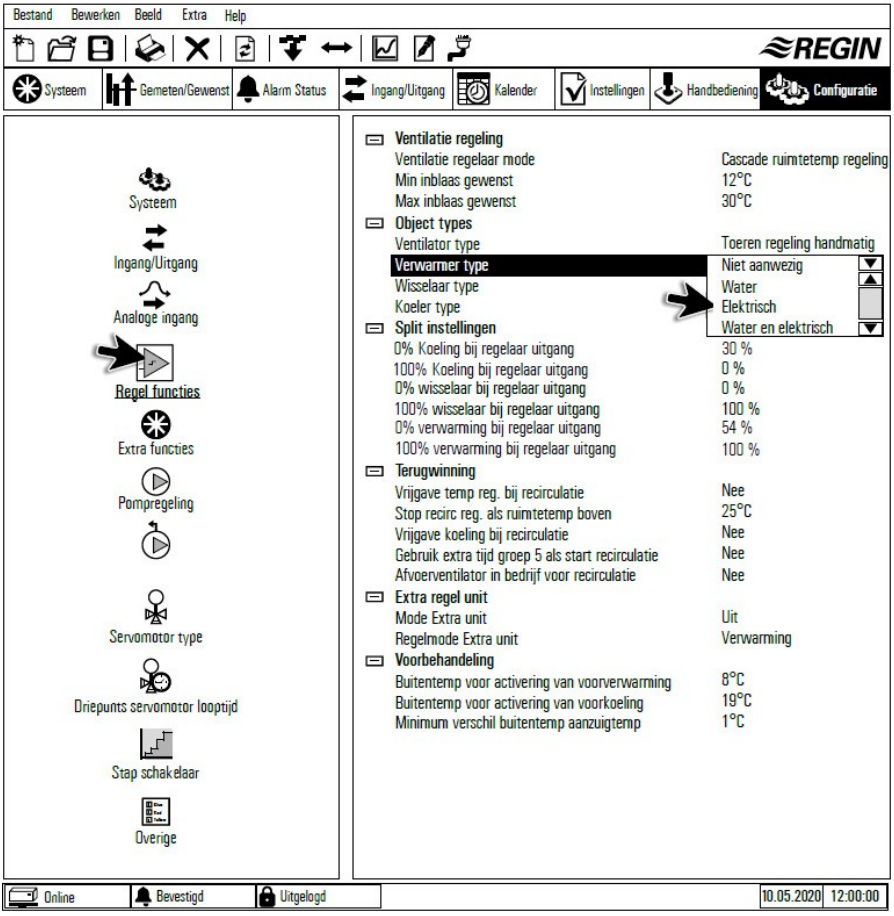


Figure 11

1. Click on the Figure 11. The 'Rule functions' menu appears on the right-hand side of the screen.
2. Click on 'Heater type' under 'Object types', a selection menu will appear. Choose the desired reheater from this menu.

Note: The settings may differ from the values shown.

Synchronising parameters (Update Controller)

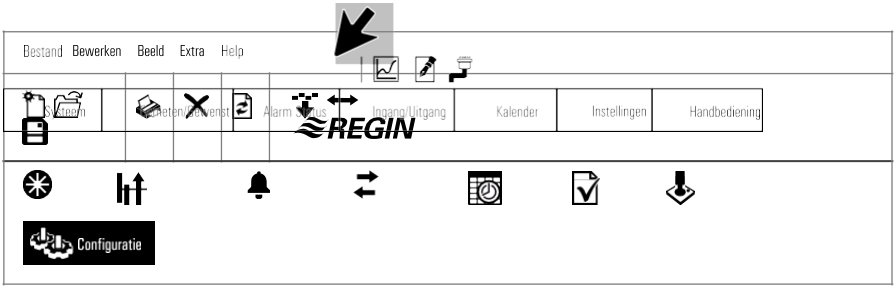


Figure 12

1. Click on 'synchronise'as shown in Figure 12 above. The 'synchronise parameters' menu will appear.
2. Select the changes you want to make from the 'synchronise parameters' menu.
3. Click on "update controller" to make the changes to the controller.
4. Now enter the administrator password (1111) to change the settings. Then click on 'OK' to finish the procedure.

11. Faults

Alarm messages
The alarm button (item 1, page17) opens the alarm list. After pressing this button, active and unconfirmed alarm messages are displayed in the menu window. The alarm LED (pos. 2, p. 17) flashes if there are unconfirmed alarm messages and lights up continuously if the alarm messages are still active but have been acknowledged. If there are several alarm messages, use the 'Up'/'Down' arrows to scroll through the messages. An alarm can be acknowledged or disabled with OK and the 'Up'/'Down' arrows. To cancel and return to the start menu, press delete and then the left arrow.

Troubleshooting
Before contacting your service representative, check and if possible rectify the following issues. Always check for active alarm messages on the control panel first.

1. Fan(s) will not start
- Check for alarm messages.
- Check that the fuses are not defective.
- Check the control panel settings (times, week schedule, automatic/manual operation, etc.).

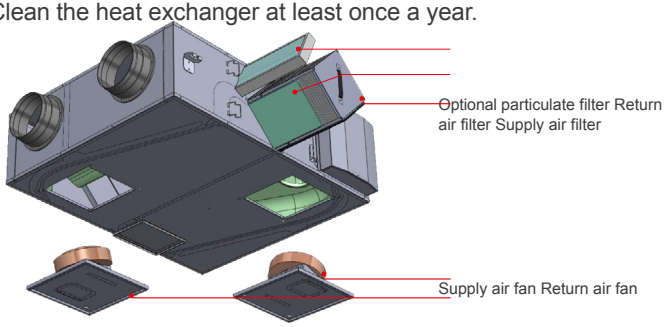
2. Reduced airflow
- Check the settings for the ventilation modes Normal and Reduced.
- Check that the external air/return air valve (if used) opens.
- Check whether the filters need to be replaced.
- Check whether openings and grilles need to be cleaned.
- Check whether the fans and the heat exchanger need to be cleaned.
- Check whether the roof outlet or the air intake is blocked.
- Check the ducts for visible damage.

3. Cold supply air
- Check the control temperature on the control panel.
- Check whether the emergency thermostat has been activated. If necessary, press the button of the electric heater with a pointed tool.
- Check whether the drain filter needs to be replaced.
- Check whether the fans have stopped due to overheating. If so, the thermal switch may have been activated.

4. Noise/vibration
- Check that the WTU is completely level.
- Clean the fan impellers.
- Check that the screws of the fans are properly tightened.

12. Maintenance

- Turn off all switches or disconnect from the mains before carrying out maintenance.
- Do not run the unit without an air filter to prevent unnecessary contamination of the WTU.
- Clean the filter after half a year.
- Change the air filter at least once a year. The article numbers of the filters can be found on page 32.
- Clean the heat exchanger at least once a year.



Step 1 Remove the service cap from the

exchanger. Step 2 Replace the filters.

Step 3 Remove the heat exchanger and clean if necessary with a hoover.

Supply and return air fans

The fans have EC-controlled external rotor motors that can be steplessly and individually controlled from 0-100%. The speed can be programmed in 2 steps (normal/reduced) in the weekly schedule. The motor bearings are lubricated and maintenance-free for their entire service life. It is possible to remove the fans for cleaning via the service hatches underneath the unit.

Important

- Before carrying out maintenance work, check that the power supply to the WTU is disconnected.
- All electrical connections must be carried out by a qualified electrician in accordance with the law and regulations.

Warning

- Even if the power supply to the WTU is disconnected, there is still a risk of injury from rotating parts that have not yet come to a complete stop.
- Beware of sharp edges. Wear protective clothing.

Maintenance intervals

The table below shows the recommended maintenance intervals for the WTU.
To ensure a long service life of the WTU, it is important to observe these maintenance intervals and to follow the maintenance instructions. Thorough and regular maintenance is a prerequisite for a valid warranty.

Type of	Once a year	If
Cleaning the heat exchanger	X	
Changing filters	X	
Cleaning fans	X	
Cleaning grids	X	
Cleaning ducts		X[1]

1. Or in accordance with local laws and regulations

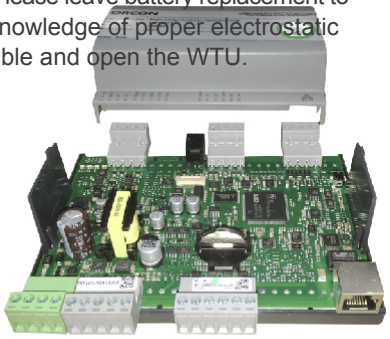
Article numbers Filters WTU

	Supply and Return air filter (2 filters)	Optional Fine dust Supply air filter
Type WTU	Coarse 45%	ePM1 55%
WTU-250-EC-E/IE	15723025	157230 27
WTU-600-EC-E/IE	15723050	157230 57
WTU-600-EC-TA	15723550	157230 57

WTU-800-EC-E/IE	15723080	157230 87
WTU-800-EC-TA	15723580	157230 87
WTU-1000-EC-E/IE	15723100	157231 07
WTU-1000-EC-TA	15723600	157231 07
WTU-1500-EC-E/IE	15723150	157231 57
WTU-2000-EC-E/IE	15723200	157232 07

Replacing the internal battery in the Corrigo controller

There is a battery inside the Corrigo to ensure that the memory and real-time clock continue to work even in the event of a power failure. When the "Internal battery" alarm occurs and the battery LED lights up red, the battery is too weak and must be replaced. Thanks to a back-up capacitor, the controller will continue to operate for at least 10 minutes even without supply voltage. Please leave battery replacement to qualified service personnel, as this requires knowledge of proper electrostatic discharge protection and of how to disassemble and open the WTU.



Step	1	Remove the cover by pushing it out over the latches with a small screwdriver.
Step	2	Replace the battery (type CR2032). Please ensure that the poles are placed correctly.

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13. EC Declaration

EC Declaration of conformity

Declares that the product:

- WTU-250-EC-IE- WTU-250-EC-TA
- WTU-600-EC-IE- WTU-600-EC-TA
- WTU-800-EC-IE- WTU-800-EC-TA
  - WTU-1000-EC-E- WTU-1000-EC-IE
  - WTU-1500-EC-E- WTU-1500-EC-IE
  - WTU-2000-EC-E- WTU-2000-EC-IE

Complies with the provisions of the directives and regulations:

- Machinery Directive 2006/42/EC.
- Directive 2014/35/EU on the making available on the market of electrical equipment.
- Directive 2014/30/EU on electromagnetic compatibility.
- Regulation (EU) No 1369/2017 on energy labelling.
- Regulation (EU) No 1253/2014.
- Directive 2011/65/EU on the restriction of certain hazardous substances in electrical equipment.

Complies with the harmonised European

standards: NEN-EN-IEC 60335-1:2012

NEN-EN-IEC 60335-2-80:2003
NEN-EN 55014-2:2015
NEN-EN-IEC 60730-1:2016
NEN-EN 55014-1:2017

Veenendaal, 01-01-2021,

M. Voorhoeve, Managing Director

Notes

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