FLEXIT

120130EN-03
2025-03

Nordic/UNI

Flexit GO

ART. NO. 120059

EN

INSTALLATION INSTRUCTIONS

Cooling coil ø200

Contents

All electrical connections must be made by a professional electrician.

Our products are subject to continuous development and we therefore reserve the right to make changes.
We accept no liability for printing errors.

1. Cooling coil for ventilation air

Included in cooling coil

- Coil unit
- Cables
- Supply air sensor (B1) WAGO clamps and bundle ties

Implementation

The housing is made from aluzinc-coated sheet steel, AZ 185. Coil with pipes and pipe connections in copper and fins in aluminium.
Opening hatch for ease of inspection and cleaning. Stainless steel drip tray (EN 1.4301) for condensate, with drain outlet (G½"). Duct connections have rubber seals.

Duct cooler fulfils leakage class C in EN 15727, ensuring that the cooled air reaches its destination without leaking from the ventilation system - thus saving energy and costs.

Coil unit

(Only Nordic)

Supply air sensor (B1) WAGO clamps and bundle ties.

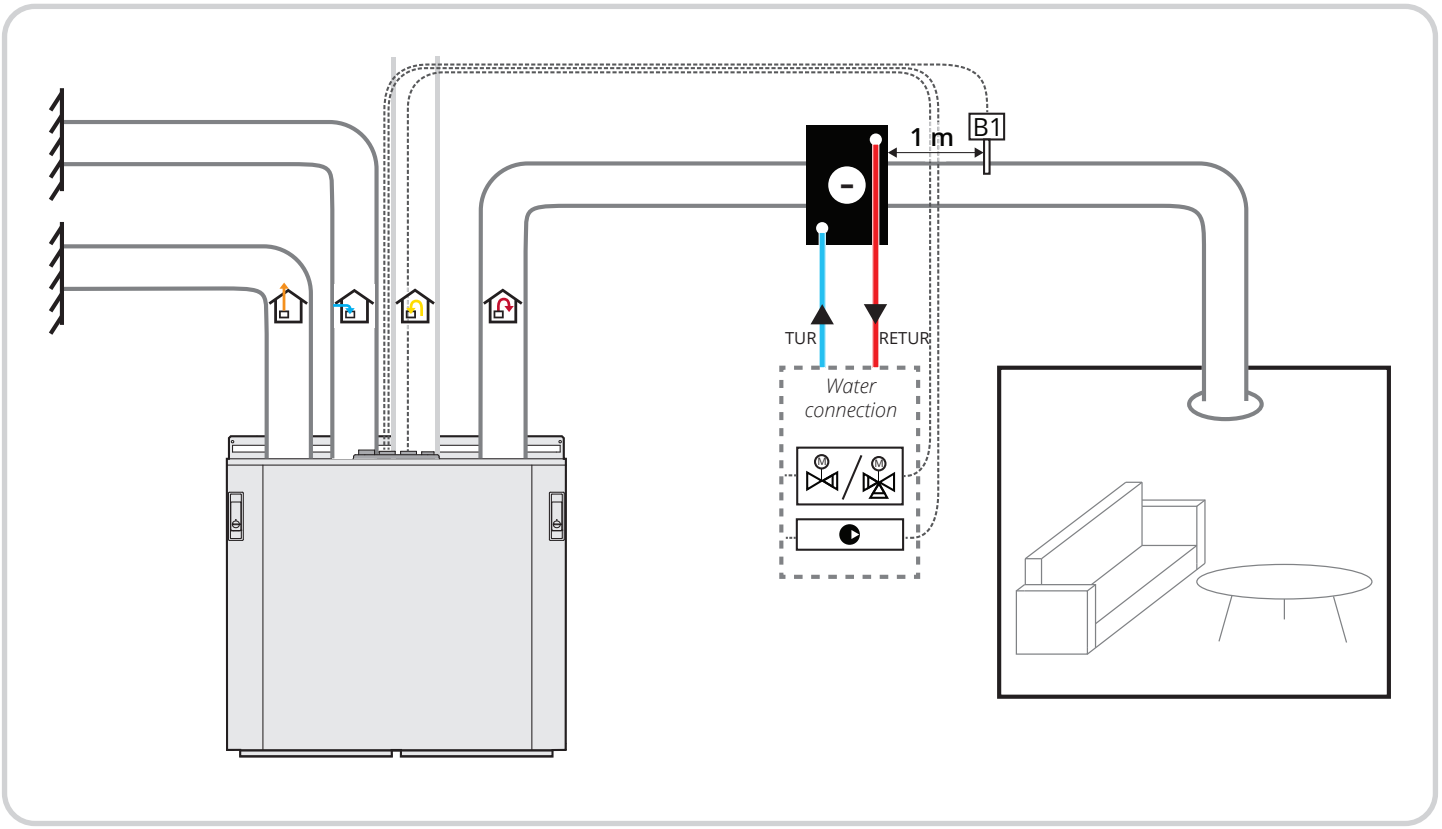
Accessories

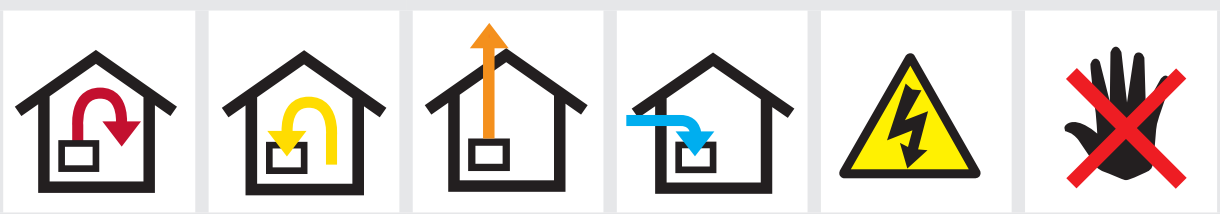
- Shunt valve
- Shunt valve motor
- Damper
- Circulation pump (not part of Flexit range)

See complete list with article numbers in chap. 12. Accessories on page 22.

Symbol	Pump	Non-return valve
Shunt valve with motor	Cooling coil	Grille
Damper with motor and return spring		
Adjustment valve, manual	B1 Temperature sensor	

2. System diagram





Supply air | *Extract air* | *Exhaust air* | *Outdoor air* | *Electrocution hazard* | *Do not touch*

Draining

During lengthy stoppages or periods where the temperature is below the freezing point of the cooling water, the water in the coil must be drained off.

3. Plumbing work

Connection of cooling water

When connecting the cooler to the pipe system, please observe the following:

1. The cooler connection must be executed according to the provisions in force.
2. Under no circumstances may the connection pipes to the coil be subject to torsional or bending stress when mounting couplings etc. Use tools to hold the parts in place during assembly.
3. Make sure that the expansion forces in the system or the deadweight of the pipe system do not put a strain on the coil connections.
4. The water inlet must usually be the bottommost connection pipe, in order to facilitate venting of the coils. A vent point on the coil or at the highest point of the system will usually be necessary.
5. The duct cooler must be connected in such a way that it is easy to empty the system, e.g. in case of repairs, lengthy stoppages or where there is a risk of freezing.
6. Immediately after filling the system with cooling water, check the duct cooler and its connection for any leaks, as these could cause water damage.

Installation

The duct cooler is suitable for insertion in a standard spiral duct. Fixation is performed with screws. The cooler should not be mounted near a fan outlet or duct bend, as this risks uneven airflow over the coil, resulting in lower efficiency. An efficient filter is recommended in the system in order to reduce maintenance. See under Maintenance.

The duct cooler can only be mounted in a horizontal duct, with air direction as shown by the mounted arrow. The duct cooler must be insulated externally to avoid condensate forming on its exterior. Normally, the ducts transporting the cooled air must also be insulated to prevent condensation. The duct cooler requires a drain for removing any condensate. To avoid unnecessary condensate collecting in the duct cooler, the assembly must be inclined 10-15 degrees in the direction of the drain. - See sketch below. The drain connection is G 1/2. The duct cooler must be connected to the drain so as to avoid any tension, pressure or torsion on the drain connection. Otherwise there will be a risk of water leakage.

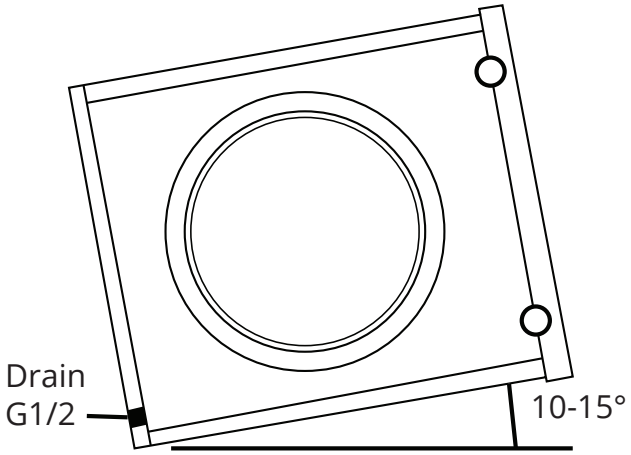
WARNING! Before beginning work: Disconnect the power supply and wait 2 minutes before opening the door.

The coil must be mounted to permit access for servicing and cleaning.

Operating data:
Max. operating temperature: 150°C
Max. operating pressure: 1.0 MPa (10 bar)

Dimensioning and calculation of cooling effect is performed in Flexit Select. (https://flexitselect.flexit.no/)

For more information, see www.flexit.se



Venting

Remember to install the T-piece for venting at the top point of the circuit.

The cooling water mixture must be adjusted to secure frost prevention equivalent for equivalent to the dimensioning outdoor winter external temperature (DVUT) in which the product is to be used. If the cooling water cannot be dimensioned down to the DVUT, the product must be emptied and drained prior to the winter season. If the cooling water freezes, the coil unit may burst apart, causing water to flow from the system, with the attendant water damage.

All functions must be tested prior to starting operation.

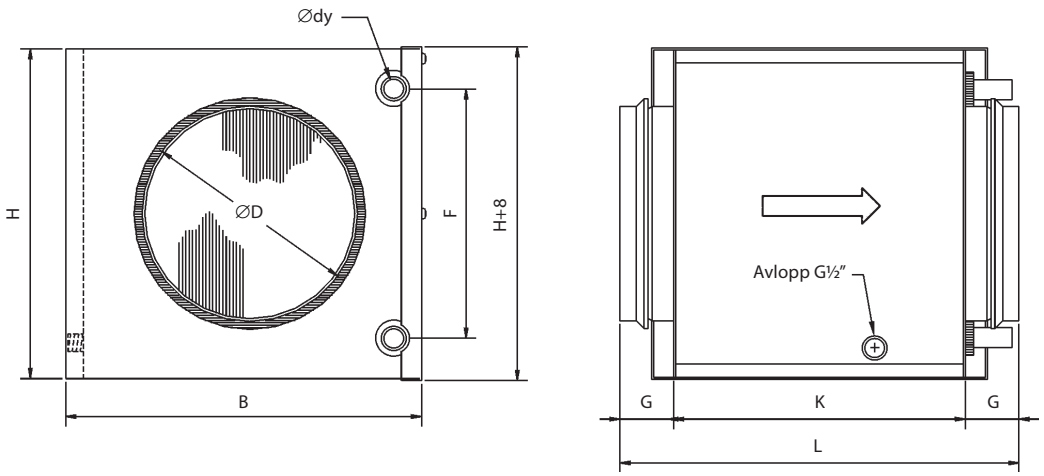
The cooling coil must be installed in a room with a drain.

Connections

Position the shunt valve as close to the cooling coil as possible (preferably no more than 2m). Note that many valve motors are bidirectional and the direction can be set on the motor. Set it so that the valve opens in response to a rising 0-10 V signal, where 0V = closed and 10V = fully open.

4. Dimensioned drawings

Cooling coil ø200, Art. no. 120059



Type	Ø D mm	B mm	H mm	Ø dy mm	F mm	G mm	K mm	L mm	Internal pipe volume, litres	Weight in kg
Cooling coil 120059	200	411	330	22	250	40	280	360	0.7	9

5. Configuration Nordic

Necessary condition: Connect a mobile phone/tablet to the same network as the product before starting the Flexit GO app.

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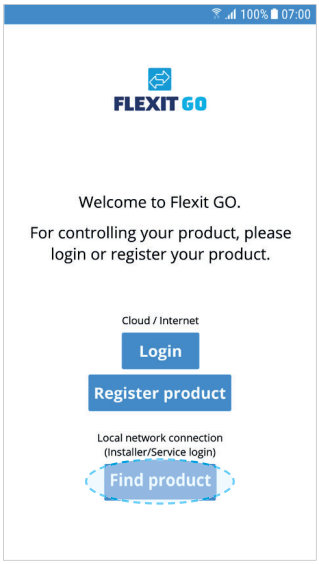

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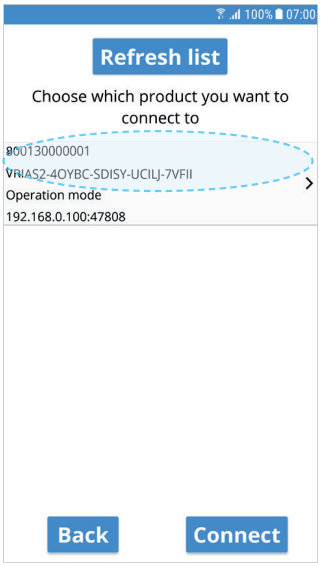

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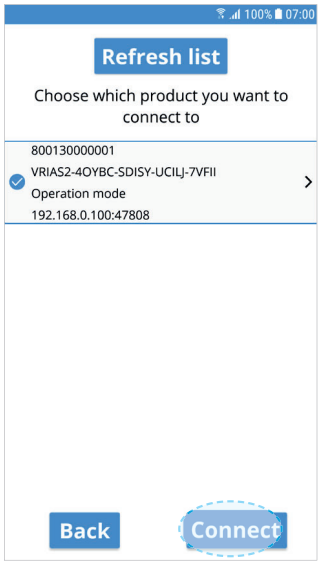

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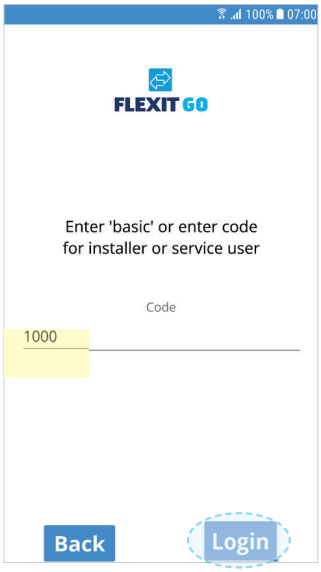

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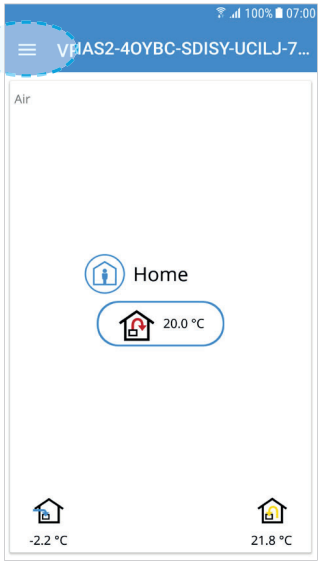

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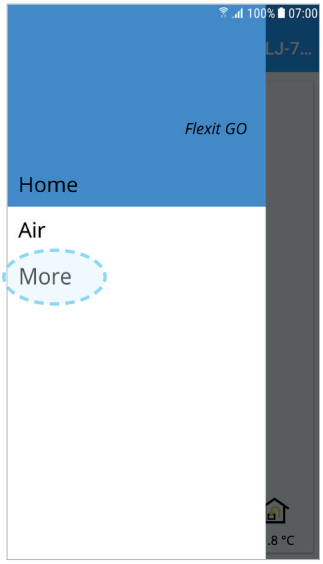

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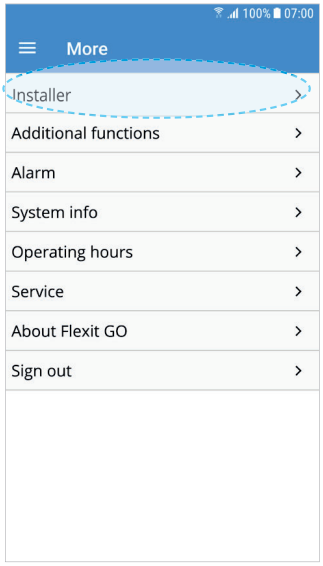

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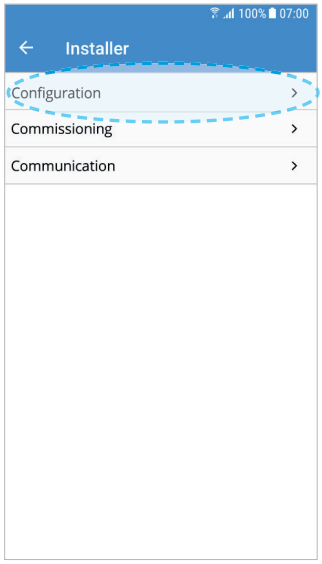

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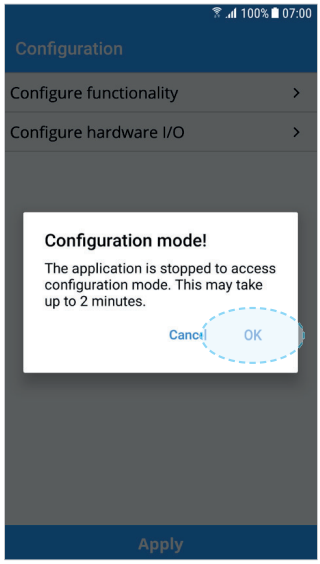

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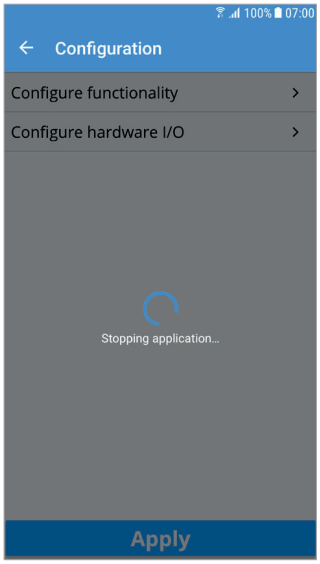

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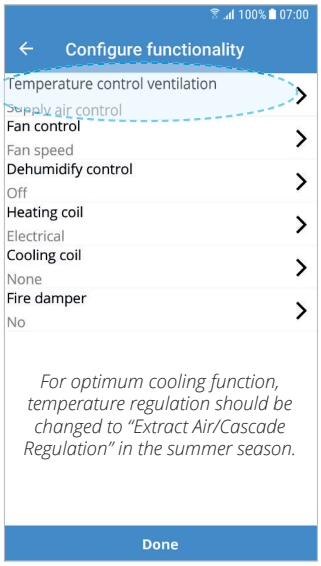

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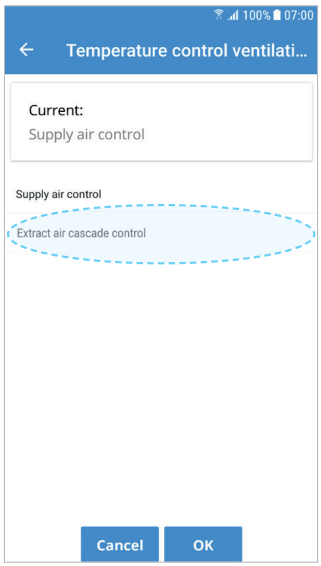

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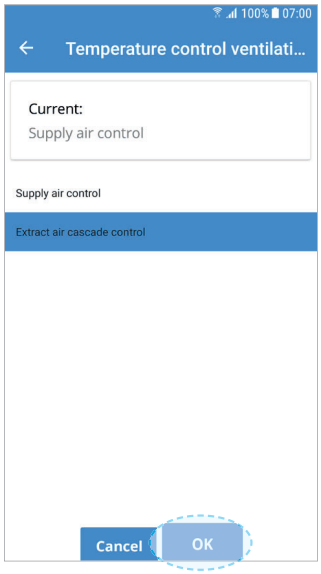

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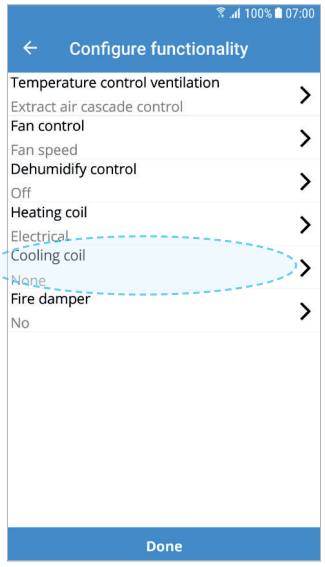

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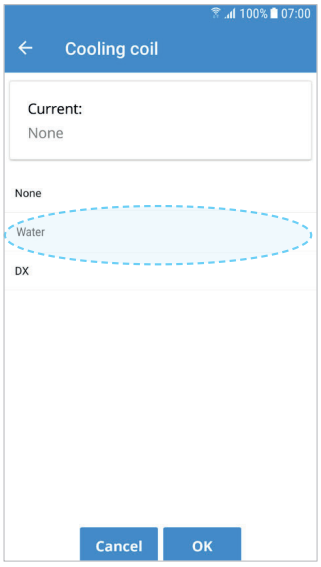

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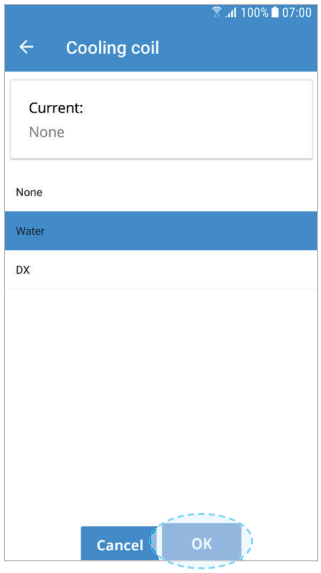

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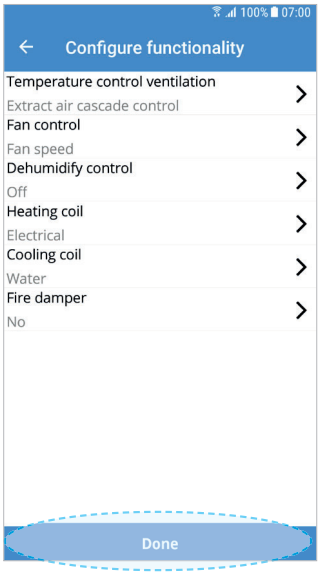

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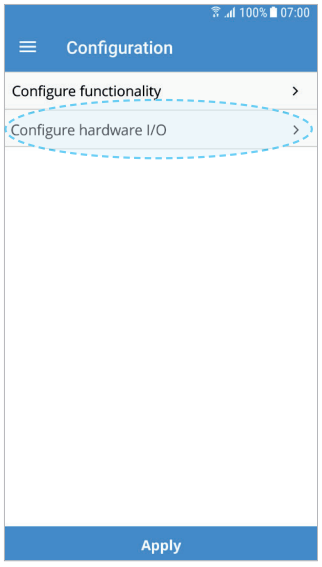

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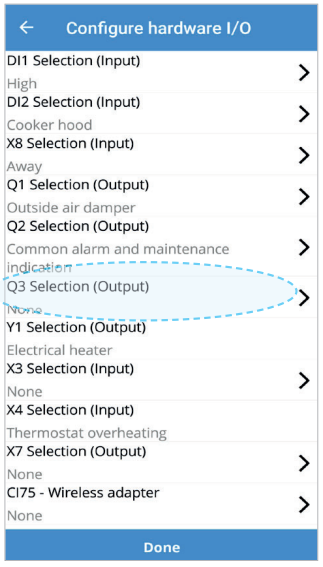

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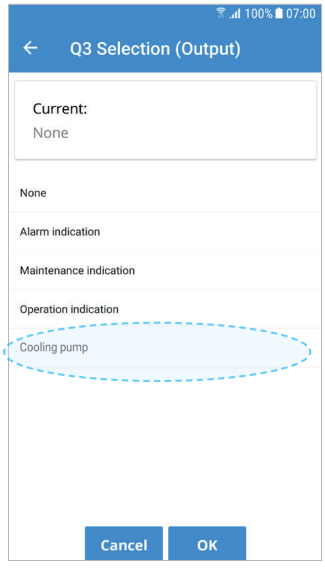

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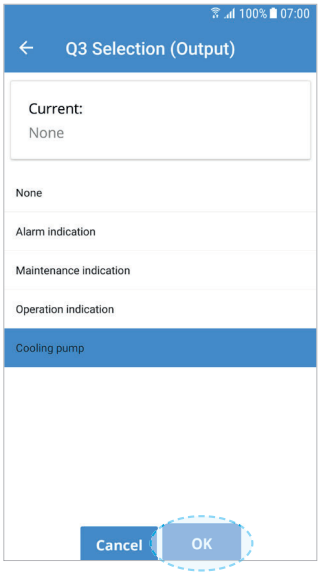

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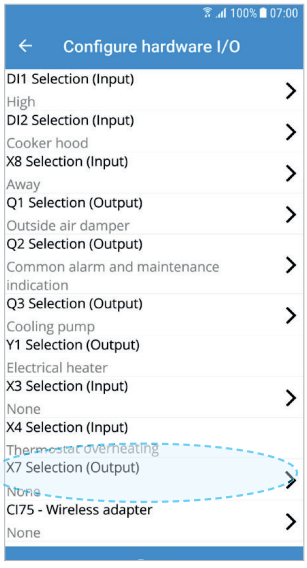

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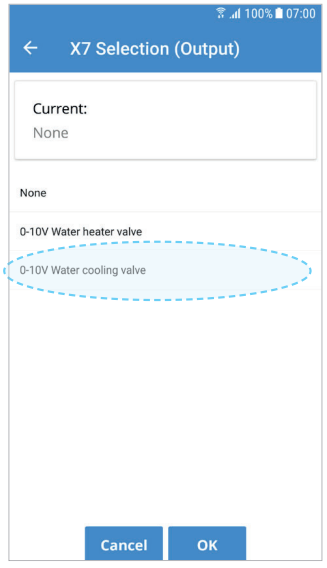

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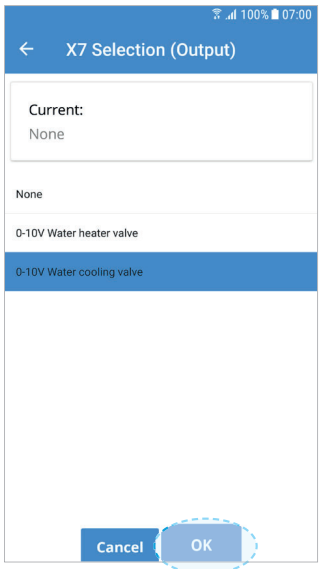

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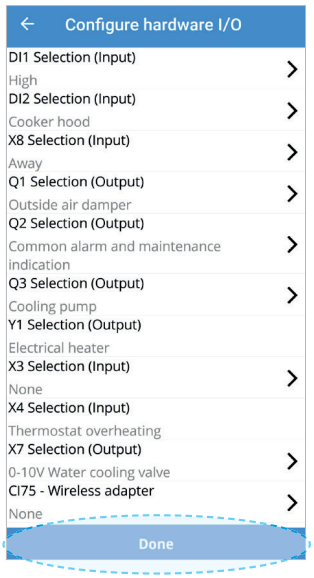

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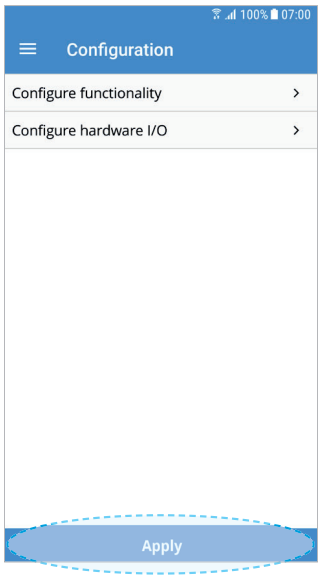

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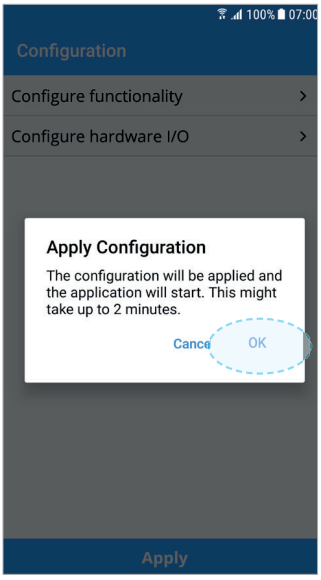

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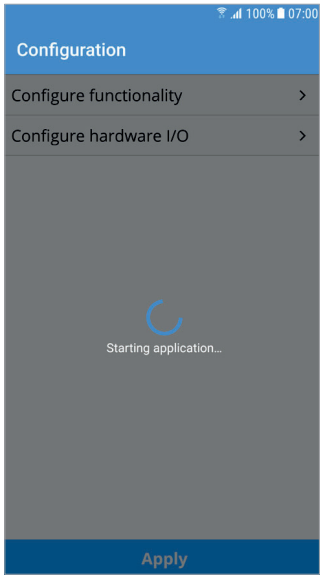

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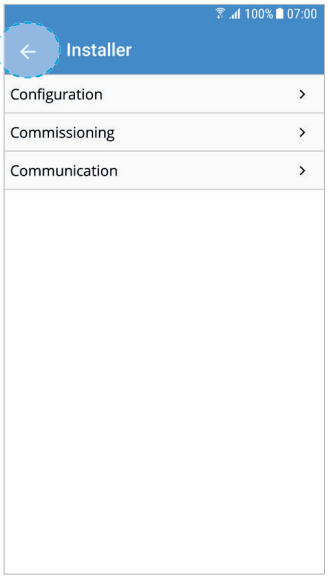

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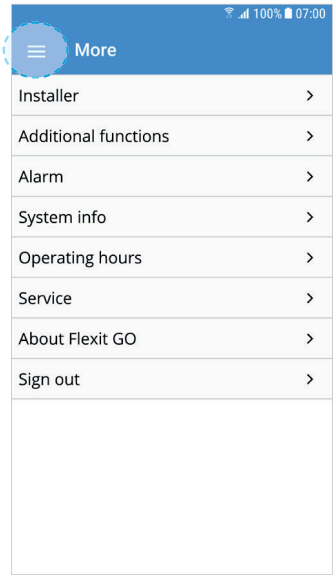

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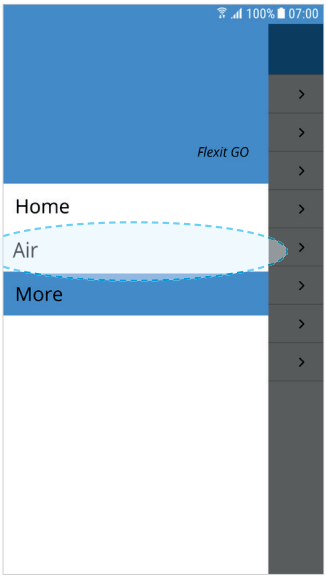

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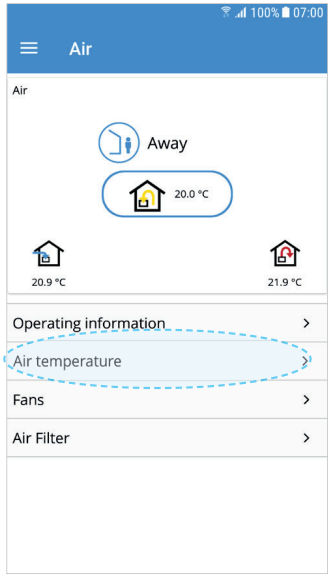

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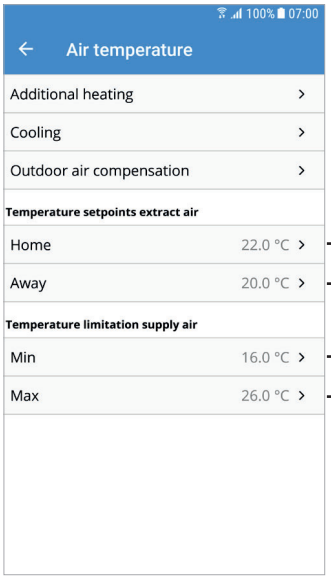


Adjust the outdoor air temperature limit for startup of cooling.

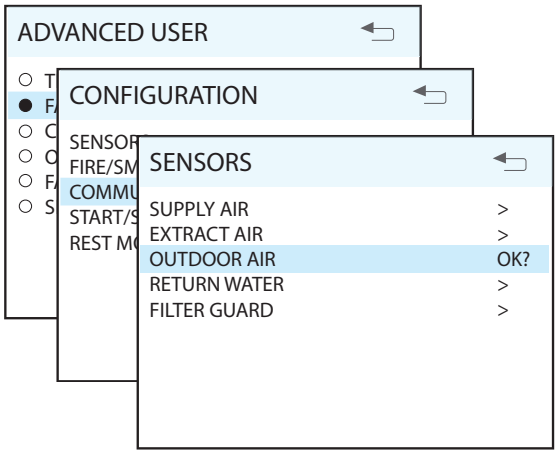
Adjust the target temperature for the desired indoor temperature.

Adjust the permitted temperature range for supply air.
NB. *Min temperature must not be set so low that there is a risk of condensation in the duct system.*

6. Configuration UNI

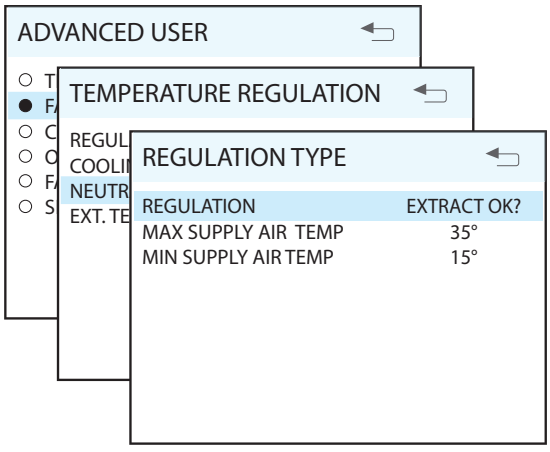
6.1. EXHAUST AIR SENSOR

To enable exhaust air control, an additional temperature sensor must be connected to the unit. The sensor is connected between terminals **P7-1** and **P7-2**.
Then, the sensor must be activated, which is done in the menu "Advanced user/Configuration/Sensors/Exhaust air", where the sensor is turned ON.



6.2. EXHAUST AIR CONTROL

Once the exhaust air sensor is installed, the control should also be activated, which is done in the menu "Advanced user/Temperature regulation/Regulation type". Change from the option SUPPLY AIR and replace it with EXTRACT. Also, adjust the desired maximum and minimum temperatures for the supply air.



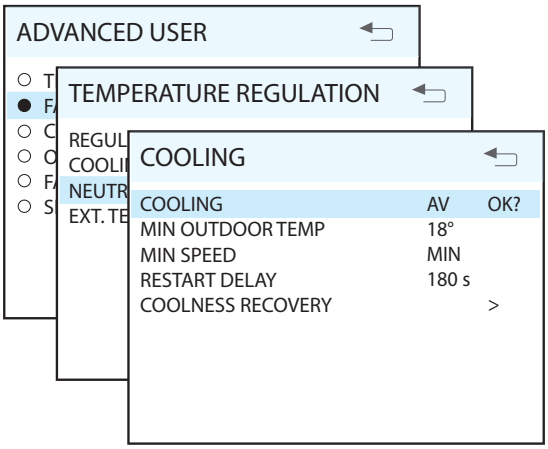
For exhaust air control, the following parameters can be adjusted:

Parameter	Default	Range	Unit
MIN. Supply air temp.	16	5-25	°C
MAX. Supply air temp.	35	15-45	°C

6.3. COOLING

The cooling function controls two outputs on the CU60, an analog 0-10 V and a digital ON/OFF for DX cooling.
Analog 0-10 V is connected between terminal **P7-6** and **P7-7**.
Digital DX is connected between terminal **P7-11** and **P7-12**.

The cooling function is activated in the menu "Advanced User/Temperature Regulation/Cooling".
When the cooling function is activated, the control type automatically changes to Exhaust



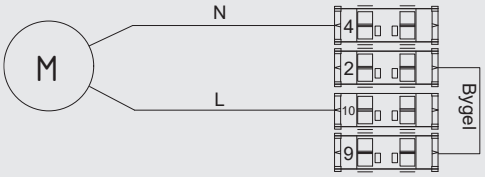
For the cooling function, the following parameters can be adjusted:

Parameter	Default	Range	Unit
MIN Outdoor air temp.	17	5-25	°C
MIN Speed	NORMAL	NORM.-MAX	°C
Activation delay	180	0-300	s

7. Circuit diagram Nordic

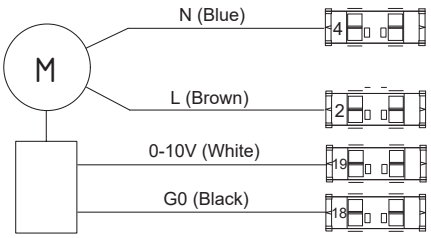
NB. The terminal block numbers are not included in the number series in the examples.

Circulation pump motor 230V.
Diagram shows connections for configuration according to the manual (cooling pump on relay output Q3)



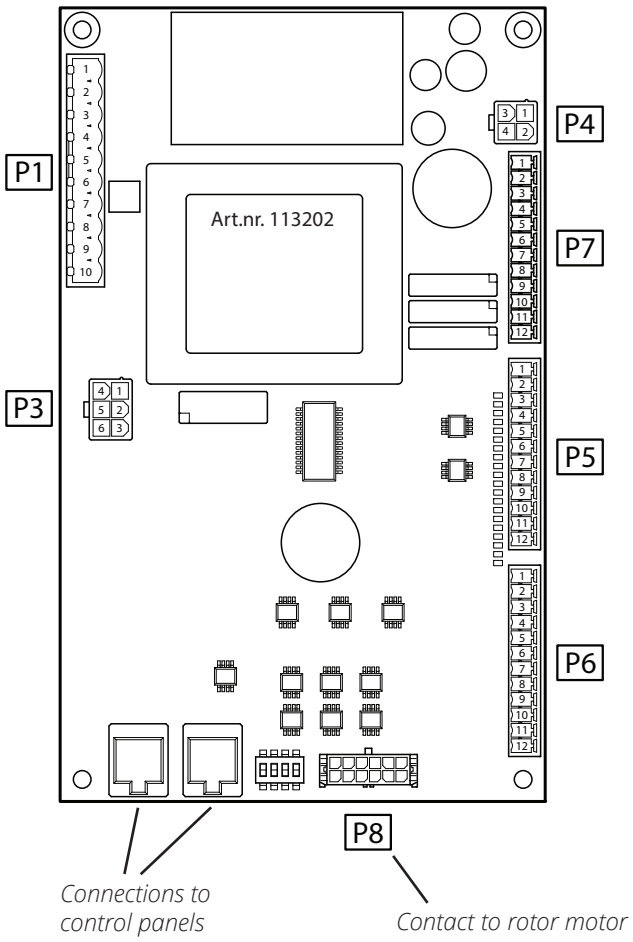
Relay output	N	L	Jumper
Q1	4	6	2-5
Q2	4	8	2-7
Q3	4	10	2-9

Shunt valve motor 230V
Cooling coil vent

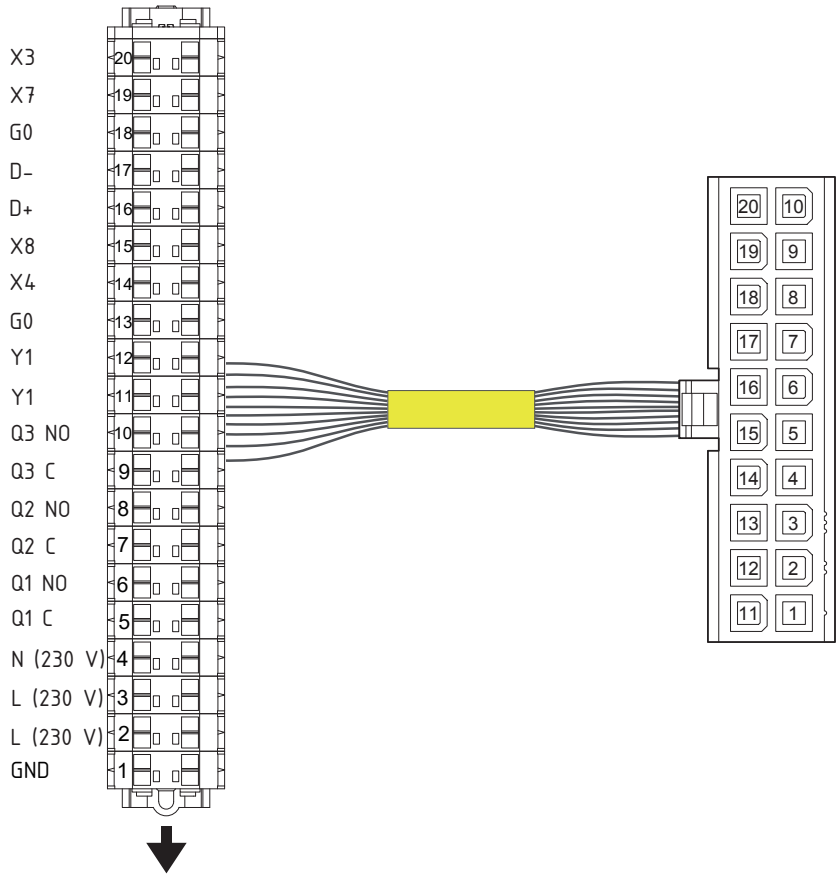


L (230V) is provided on both block no. 2 and 3.

8. Circuit diagram UNI



P7		
P7	1	B3 - Extract air sensor
P7	2	G0
P7	3	B4 - Outdoor air sensor
P7	4	G0
P7	5	TS - Setpoint temperature 0-10V
P7	6	C0 - Cooling 0-10V
P7	7	G0
P7	8	ALA - Total alarm, A-priority
P7	9	ALA - Total alarm, B-priority
P7	10	REA - Powersupply to alarm outputs
P7	11	C01 - DX-cooling ON/OFF
P7	12	REC - Powersupply till DX-cooling



Matches contact in electrical compartment in system.

1	GND	Protective earth
2	L (230 V)	L 230 V
3	L (230 V)	L 230 V
4	N (230 V)	N - 230 V
5	Q1 C**	Supply digital output 1
6	Q1 NO*	**Digital output 1 normally open** **The following options are available:** None Outdoor air damper Fire damper Common alarm/maintenance Alarm indicator Maintenance indicator Operation indicator Bypass damper Cooling pump
7	Q2 C**	Supply digital output 2
8	Q2 NO*	**Digital output 2 normally open** **The following options are available:** None Outdoor air damper Fire damper Common alarm/maintenance Alarm indicator Maintenance indicator Operation indicator Bypass damper Cooling pump
9	Q3 C**	Supply digital output 3
10	Q3 NO*	**Digital output 3 normally open** **The following options are available:** None Outdoor air damper Fire damper Common alarm/maintenance Alarm indicator Maintenance indicator Operation indicator Bypass damper Cooling pump
11	Y1*	**Digital output Y1 (230 V)** **The following options are available:** None Battery Pump water coil
12	Y1*	**Digital output Y1 (230 V)** **The following options are available:** None Battery Pump water coil
13	G0	Signal earth
14	X4*	**Digital or analogue output** **The following options are available:** None Overheating thermostat Return water sensor
15	X8*	**Digital input X8** **The following options are available:** None Home Away Emergency stop CO detector Smoke detector - extract air Smoke detector - supply air Smoke detector - off Smoke detector - max Fire damper feedback
16	D+	Modbus slave D+
17	D-	Modbus slave D-
18	G0	Signal earth
19	X7*	**Analogue output 0 -10 V** **The following options are available:** None 0-10V valve water coils heating 0-10V valve water coils cooling
20	X3*	**Analogue output 0 -10 V** **The following options are available:** None 0-10V Air humidity sensor 0-10V CO_2 sensor

* These inputs/outputs may have different functions depending on the configuration selected via Flexit GO. The underlined options are standard on units configured for water heating.

** Max voltage 230 V AC, max current 2A resistive load.

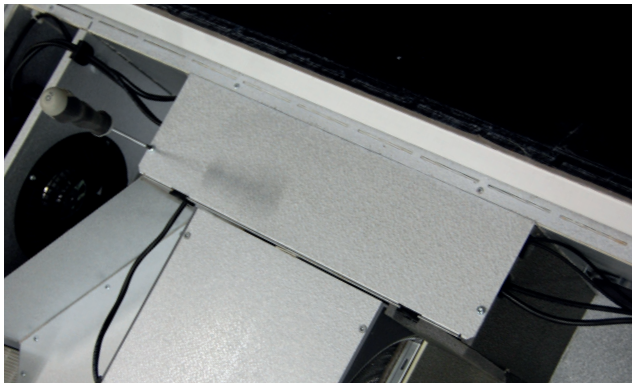
9. Electrical connections Nordic

All electrical connections must be made by a professional electrician.

WARNING! Before you begin work: Disconnect the power supply and wait 2 minutes before opening the door.

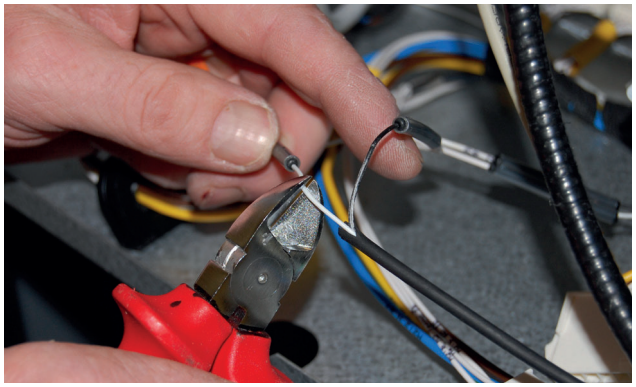
1

Remove the lid from the electrical cabinet



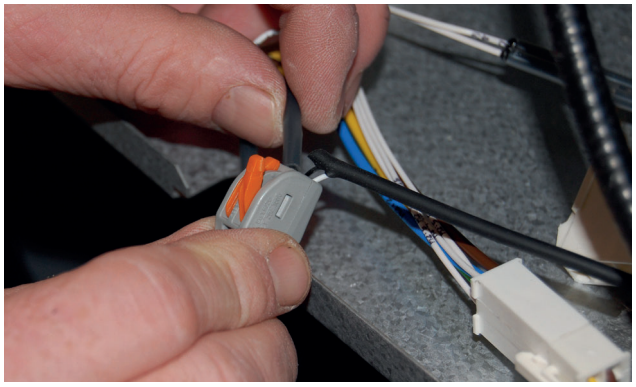
2

Localize the temperature sensor (B1) and cut it off.
TIP: Follow the sensor from the supply air fan into the electrical compartment.



3

Splice the supplied NTC sensor with the ends of the freshly cut cables. NB Splice the cables which lead to the controller card.

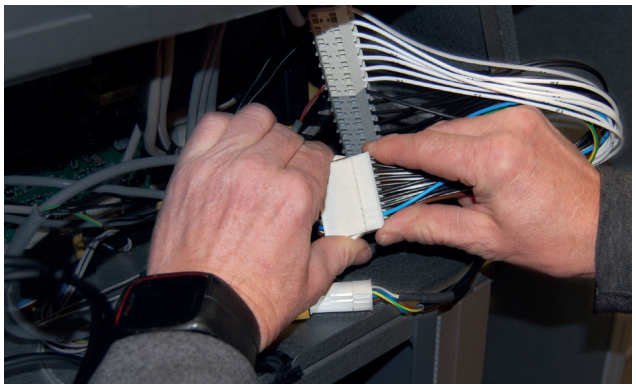


4

Connect all cables to the terminal block according to the circuit diagram, before pressing it into place on the electrical compartment wall.

5

Connect the contacts in the electrical compartment.



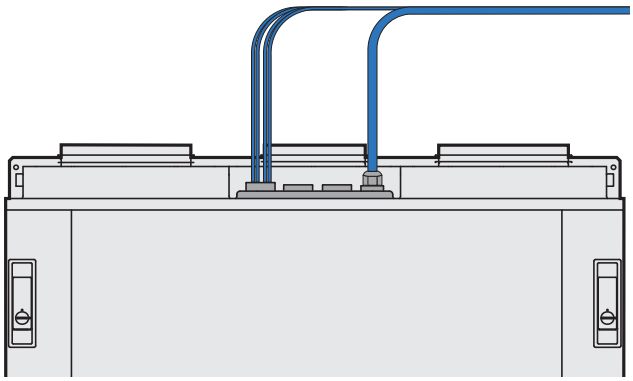
6

The temperature sensor (B1) must be placed after the cooling coil.

The temperature sensor supplied with the cooling coil must be positioned in the supply air duct (cf. label on unit) approx. 1m after the cooling coil. Drill a 7 mm hole in the duct in which the sensor can be placed. Seal the hole with sealant and tape the wire in place on the outside of the duct.

7

Use the cable entries on the unit for connecting external components. Connect the shunt motor and circulation pump as shown on the wiring diagram, point 6.



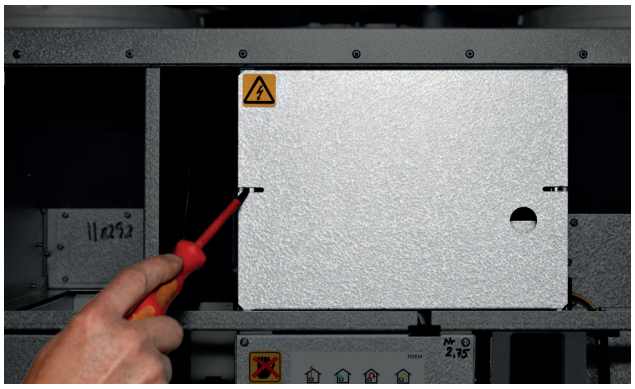
10. Electrical connections UNI

All electrical connections must be made by a professional electrician.

WARNING! Before you begin work: Disconnect the power supply and wait 2 minutes before opening the door.

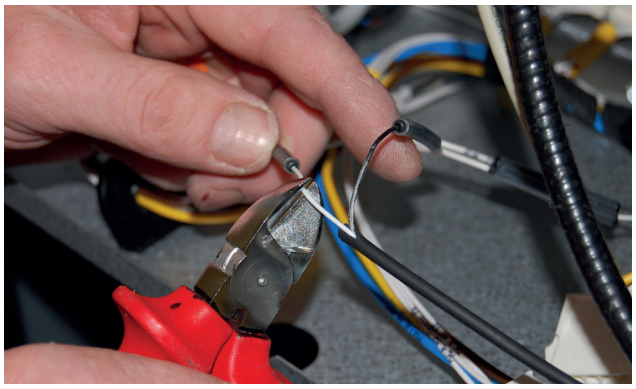
1

Remove the cover of the electrical compartment.



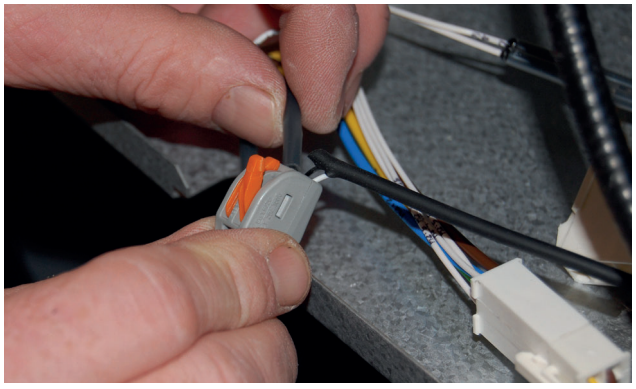
2

Locate the temperature sensor (B1) and cut it off.
TIP: Follow the sensor from the supply air fan into the electrical room.



3

Connect the included NTC sensor with the ends of the just clipped cables. **NOTE!** Connect the cables going to the circuit board.



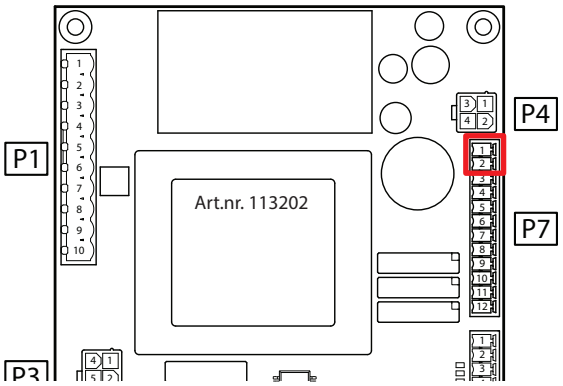
4

The temperature sensor (B1) must be placed after the cooling coil.

The temperature sensor that comes with the cooling coil must be placed into the supply air duct (according to the label on the unit), approximately 1m after the cooling coil. Drill a 7 mm hole in the duct where the sensor can be inserted. Seal the hole with sealant and tape the wire to the outside of the duct to keep it in place.

5

Connect the exhaust air sensor (accessory) to the circuit board at terminal **P7:1** and **P7:2**.



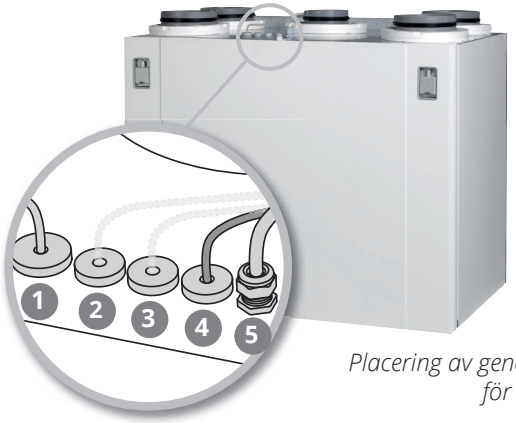
6

The temperature sensor (B2) is placed in the exhaust air duct

The temperature sensor is placed in the exhaust air duct. Drill a 7 mm hole in the duct where the sensor can be inserted. Seal the hole with sealant and tape the wire to the outside of the duct to keep it in place.

7

Use the unit's cable penetrations (No. 2 or 3) when connecting external components. Connect the bypass motor and circulation pump according to the wiring diagram in Chapter 8.



Placering av genomföringar för elledningar

11. Maintenance

To achieve the full effect of the heater/cooler, the coil must be cleaned at regular intervals. The time between cleaning will depend entirely on the cleanness of the air and how well the filter and the rest of the unit are maintained.
The coil is easily accessible for cleaning once the heater/cooler lid is removed. Clean the inlet side of the coil first using a brush, after which the whole coil unit can be cleaned with compressed air, water or steam.
Blow or flush the dirt away from the outlet side towards the inlet side. Cleaning is easier if a mild solvent is used (having confirmed that the solvent does not attack copper or aluminium).
Be careful not to damage the thin edges of the fins.

12. Accessories

Shunt valve:

- For continuous regulation of hot or cold water in open or closed circuits
- Flow control of heater/cooler in air conditioning plant.
- Bubble tight closure in closed position
- Cold or hot water which may be mixed with anti-freeze liquid by up to 50% vol.

3-way

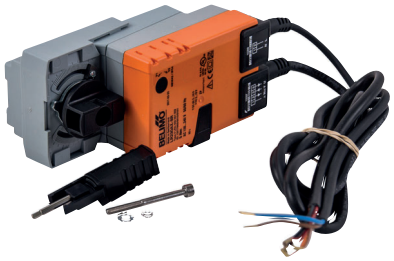
3-port regulating valve with linear (equal percentage) flow characteristic.

Internal threaded connection Rp 1/2", DN 15
Housing nickel-coated hot-pressed brass
Valve cone housing stainless steel
Seal PTFE/EPDM O-ring
ps 1600kPa

2-way

2-port regulating valve with linear (equal percentage) flow characteristic.

Internal threaded connection Rp 1/2", DN 15
Housing nickel-coated hot-pressed brass
Valve cone housing stainless steel
Seal PTFE/EPDM O-ring
ps 1600kPa



Shunt valve motor:

AC 100-240V 50/60Hz
Operating power consumption 1.5W at nominal torque in standby 0.4W for dimensioning 4VA.
Connection cable 1m 3x0.75mm2
Torque min 5Nm at rated voltage
Sound level max 5dB(A) without valve
Position indicator
Mechanical
Protection class 2
Enclosure class IP54

	Overview
56596	Motor for shunt valve
	Shunt valves
110939	2-way valve DN15 Kvs 0.25
110940	2-way valve DN15 Kvs 0.4
110941	3-way valve DN15 Kvs 0.25
110942	3-way valve DN15 Kvs 0.4

111812	2-way valve DN15 Kvs. 0.63
111813	3-way valve DN15 Kvs. 0.63
111814	2-way valve DN15 Kvs. 1.0
111815	3-way valve DN15 Kvs. 1.0
112817	2-Way valve DN15 Kvs 1.6
112818	3-Way valve DN15 Kvs 1.6
112815	2-Way valve DN15 Kvs 4.0
112816	3-Way valve DN15 Kvs 4.0

Flexit AS, Moseveien 8, NO-1870 Ørje
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