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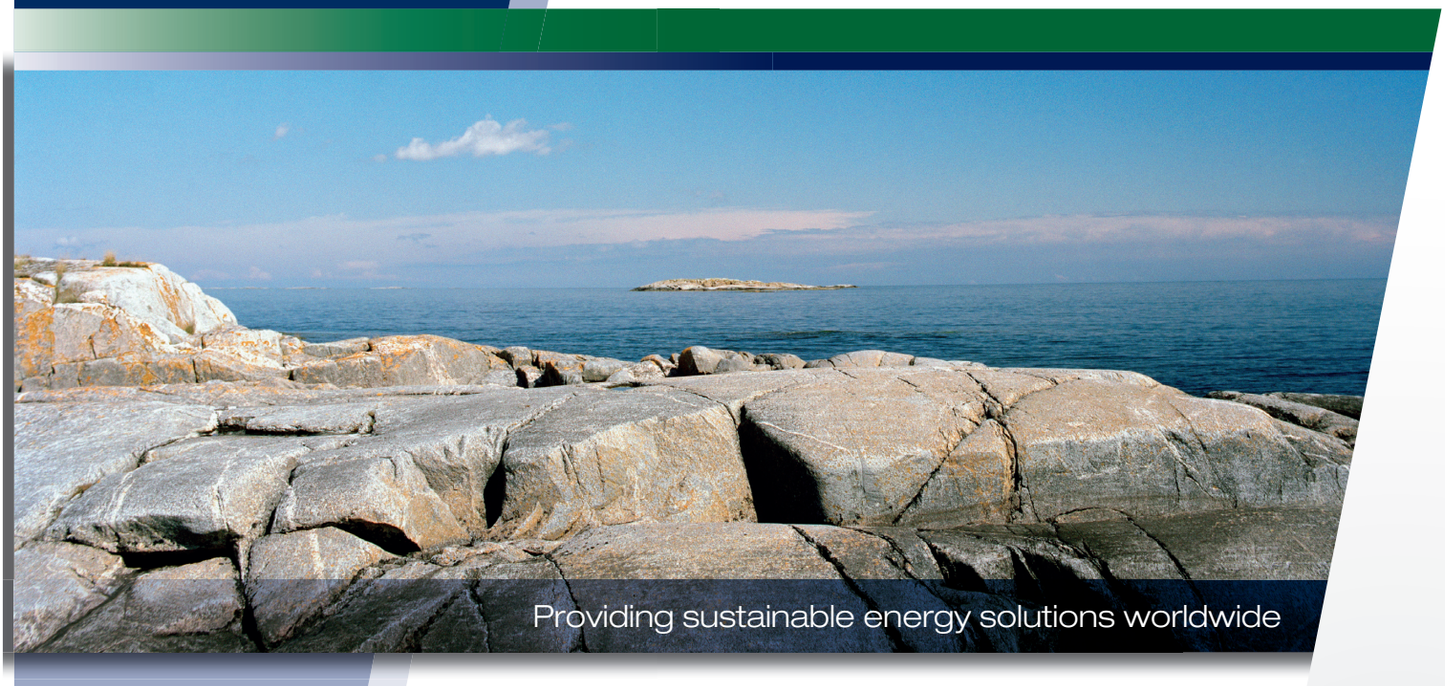


Installation- and Maintenance Manual

CTC EcoAir 510M

Modulating air/water heat pump

400V 3N~

IMPORTANT
READ CAREFULLY BEFORE USE
KEEP FOR FUTURE REFERENCE

Enertech Group

Installation and Maintenance Manual

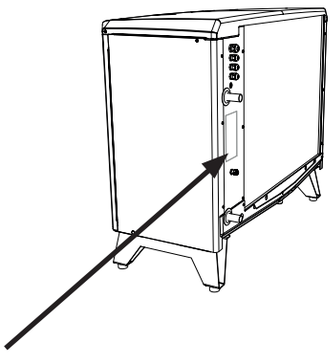
CTC EcoAir 510M

Modulating air/water heat pump

400V 3N~

Table of Contents

GENERAL INFORMATION



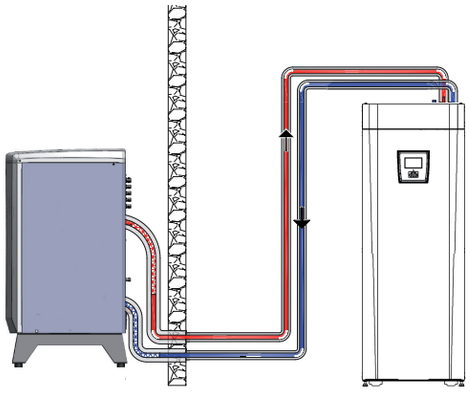
Quick reference

Fill in the information below. It may come in useful if anything should happen.

Product:	Manufacturing number:
Installer:	Name:
Date:	Tel. no.:
Electrical installer:	Name:
Date:	Tel. no.:

No liability is accepted for any misprints. We reserve the right to make design changes.

The Complete System



CTC EcoAir 510M

CTC EcoAir 510M is a modulating air source heat pump that takes heat from the outside air and supplies it to the existing heating system in the house. The heat pump works with outdoor temperatures down to -22°C.

The CTC EcoAir 510M has been designed to operate with high efficiency and low noise levels. The heat pump has integrated hot gas defrosting which keeps the evaporator coil free from ice to maintain high efficiency.

CTC EcoZenith i250

The CTC EcoZenith i250 is fully designed to work with the CTC EcoAir 510M outdoor air heat pump. Controlling the heat pump and charge pump is maintained entirely by CTC EcoZenith i250.

CTC EcoAir 510M 400V 3N~ must be connected to CTC EcoZenith i250.

The CTC EcoZenith i250 is a complete tank which meets your home's heating and hot water requirements. It has a built-in immersion heater giving a total of 15 kW and is equipped with a motorised mixing valve which ensures correct and even temperatures are supplied to your heating system. It also has a built-in circulation pump for connection to the heat pump.

Ecodesign information relating to the current combination (current package) can be downloaded from www.ctc.se/ecodesign. Energy labelling stickers can also be printed from here.

Checklist

The check list must be completed by the installer.

- If service is needed, you may be required to provide this document.
- Installation must always be done according to the installation and maintenance instructions
- Installation must always be carried out in a professional manner

Following installation, the unit must be inspected and functional checks performed as indicated below:

Pipe installation

- ☐ Heat pump filled, positioned and adjusted in the correct manner according to the instructions.
- ☐ The heat pump should be positioned so that it can be serviced
- ☐ Capacity of the charge/radiator pump (depending on type of system) for the flow required.
- ☐ Open radiator valves (depending on type of system) and other relevant valves.
- ☐ Tightness test
- ☐ Bleed the system
- ☐ Check proper operation of the requisite safety valves
- ☐ Action taken to deal with condensation water

Electrical installation

- ☐ Power switch
- ☐ Correct tight wiring
- ☐ Requisite sensors fitted
- ☐ Heat pump activated and started
- ☐ Accessories

Information for the customer (adapted to current installation)

- ☐ Start-up with customer/installer
- ☐ Menus/controls for selected system
- ☐ Installation and maintenance manual supplied to the customer
- ☐ Check and filling, heating system
- ☐ Information on fine adjustments
- ☐ Alarm information
- ☐ Functional test of safety valves fitted
- ☐ Information on procedures for fault registration

_____ _____

Date / Customer Date / Installer

Important to remember!

Check the following points in particular at the time of delivery and installation:

- The product must be transported and stored in an upright position.
- Remove the packaging and check before installation that the product has not been damaged in transit. Report any transport damage to the carrier.
- Place the product on a solid foundation.
- The CTC EcoAir 510M has a factory-fitted condensation water tray where the condensation water is conducted to a stone curb, surface water gully, down pipe or other drainage. You should therefore consider the position of the product.
- If the condensation water pipe is not used, the foundation must be such that condensing water and melted snow can drain into the ground. Make a 'stone curb' under the heat pump. Remove 70-100 cm and fill up with crushed stones to obtain the best possible drainage.
- The outdoor unit must stand level – check with spirit level.
- Remember to leave a service area of at least 2 m in front of the product.
- Flexible hoses should be installed closest to the heat pump. Outdoor pipes should be thoroughly insulated with weather-proof insulation.
- Ensure that pipes used between the heat pump and the heating system are of adequate dimensions.
- Ensure that the circulation pump has sufficient capacity to pump the water to the heat pump
- The installation should be preceded by an omnipolar switch.
- CTC EcoAir 510M must be connected to CTC EcoZenith i250
- CTC EcoZenith 250 must have software version 20150821 or later.

! If these instructions are not followed when installing, operating and maintaining the system, Enertech's commitment under the applicable warranty terms is not binding

Safety Instructions

The following safety instructions must be observed when handling, installing and using the product:

- Close the omnipolar switch before doing any work on the product.
- If there already is a ground fault breaker, the CTC EcoAir must also be fitted with its own ground fault breaker with on/off delay.
- The product must not be flushed with water.
- When handling the product with a hoist ring or similar device, make sure that the lifting equipment, eyebolts etc. are not damaged. Never stand under the hoisted product.
- Never jeopardise safety by removing bolted covers, hoods or similar.
- Never jeopardise safety by deactivating safety equipment.
- Any work done on the product's cooling system should be done by authorised personnel only.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- Children should be supervised to ensure that they do not play with the appliance.

1. Technical data

		CTC EcoAir 510M	CTC EcoAir 520M
Electrical data		400V 3N~ 50Hz	
Input power [1]	kW	0.47 / 2.28	0.9 / 3.8
Output power [1]	kW	2.5 / 6.33	4.9 / 10.4
COP [1]		5.31 / 2.78	5.24 / 2.71
Rated current [2]	A	8.5	19.5
Max start current	A	2.7 A	4.9
Water volume	L	1.9	2.8
Refrigerant quantity (R407C, fluorinated greenhouse gases GWP 1774)	kg	2.2	2.7
CO2 equivalent	ton	3.903	4.790
High pressure switch	bar	31	
Max. operating pressure water (PS)	bar	2.5	
Dimensions (H x W x D)	mm	1080 x 1245 x 545	1180 x 1375 x 610
Compressor / Oil type		Inverter scroll / PVE FV50S	
Air flow 100%	m^3/h	3800	6200
Fan speed	rpm	Modulating	
Fan, max power	W	73	170
Weight	kg	126	186
Sound power [3]	dB(A)	55.9/53.5	60.5/55.4

[1] At 35°C water temperature. +7 @ 20 rps / -7 °C @ 90 rps. According to EN 14511.

[2] At 120 rps (from factory max 90 rps). Incl. Grundfos UPM GEO 25-85 charge pump.

[3] Sound power level in accordance with EN12102/ISO3741 at test conditions A7 W47/55 and A7 W30/35

No annual leakage control of the refrigerant is required

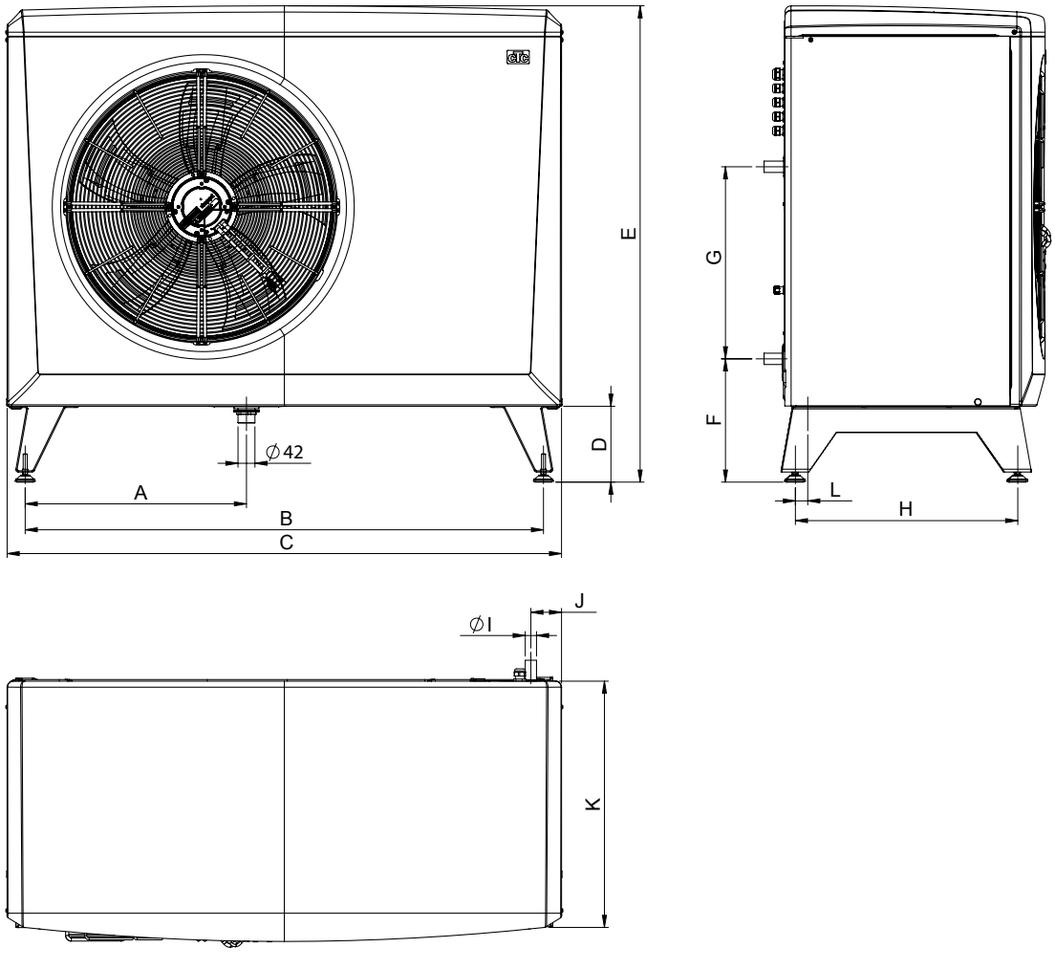
! Note: In case of deviations, the product's data plate applies. When servicing always check the product's data plate for correct refrigerant quantity.

1.1 Sound pressure data

	Sound power	Sound pressure 5 m *	Sound pressure 10 m *
CTC EcoAir 510M	53.5 dB(A)	30-33 dB(A)	24-27 dB(A)
CTC EcoAir 520M	55.4 dB(A)	32-35 dB(A)	26-29 dB(A)

* The sound specified should be regarded as an indication since the level is affected by the compressor's and the fan's speed, as well as the surroundings. The upper value corresponds to 100% reflecting ground and walls (smooth concrete).

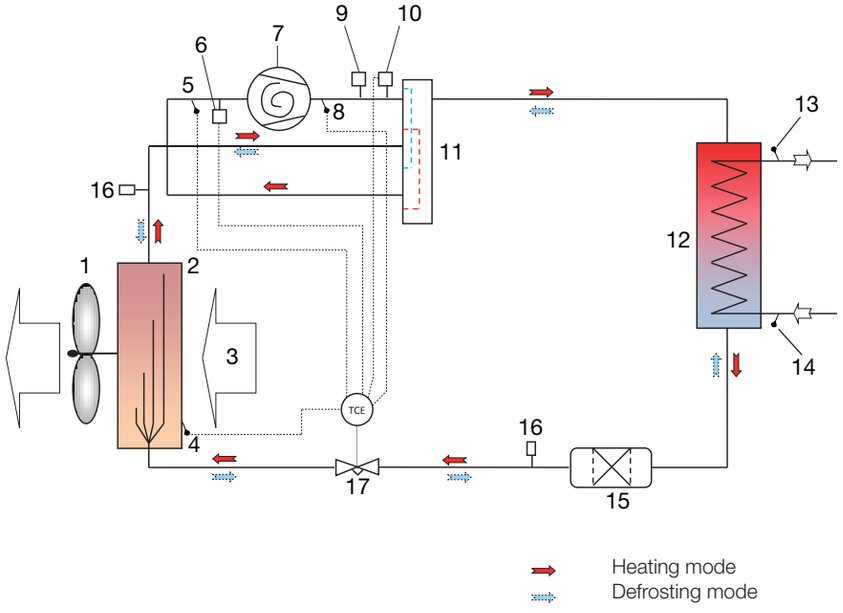
1.2 Dimensional drawing



	CTC EcoAir 510M	CTC EcoAir 520M
A	486	549
B	1155	1285
C	1245	1375
D	188	188
E	1080	1180
F	301	306
G	476	476
H	451	551
I	Ø28	Ø28
J	80	76
K	530	610
L	10	33

1.3 Refrigerant system

Refrigerant system CTC EcoAir 510M

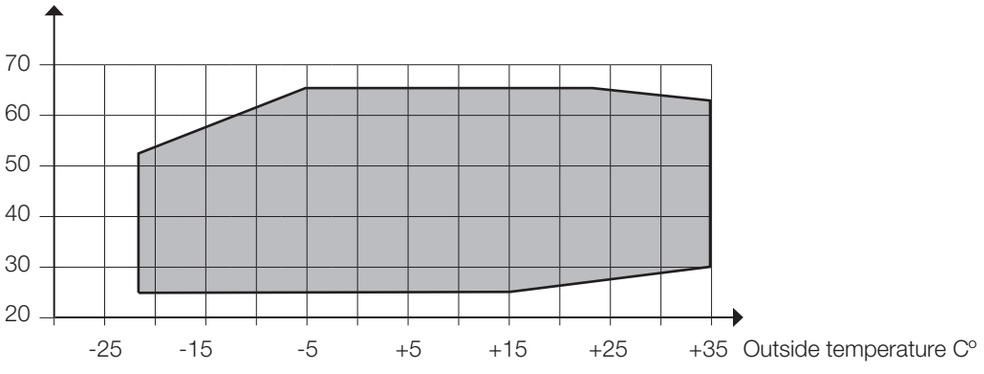


1. Fan
2. Evaporator
3. Air
4. Defrosting sensor (B16)
5. Suctiongassensor (B22)
6. Low pressure sensor (B101)
7. Compressor
8. Hot gas sensor (B21)
9. High pressure switch
10. High pressure sensor (B100)
11. 4-way valve
12. Condenser
13. Primary flow sensor (B1)
14. Return sensor (B7)
15. Drying filter
16. Schrader
17. Expansion valve
18. Non return valve

1.4 Operating range

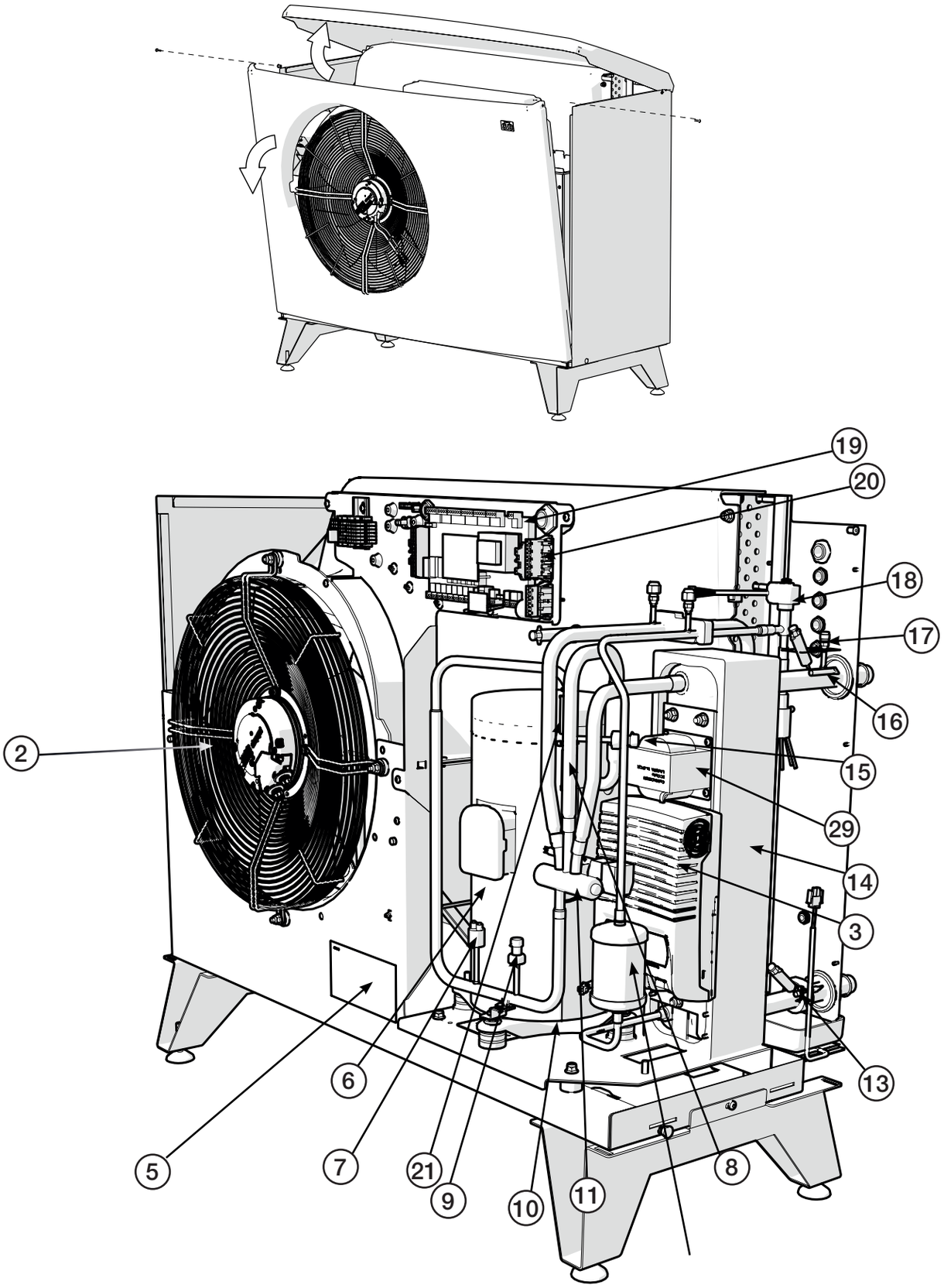
The control system for the CTC EcoAir 510M monitors and ensures that the product is working within its operating range.

Primary flow C°

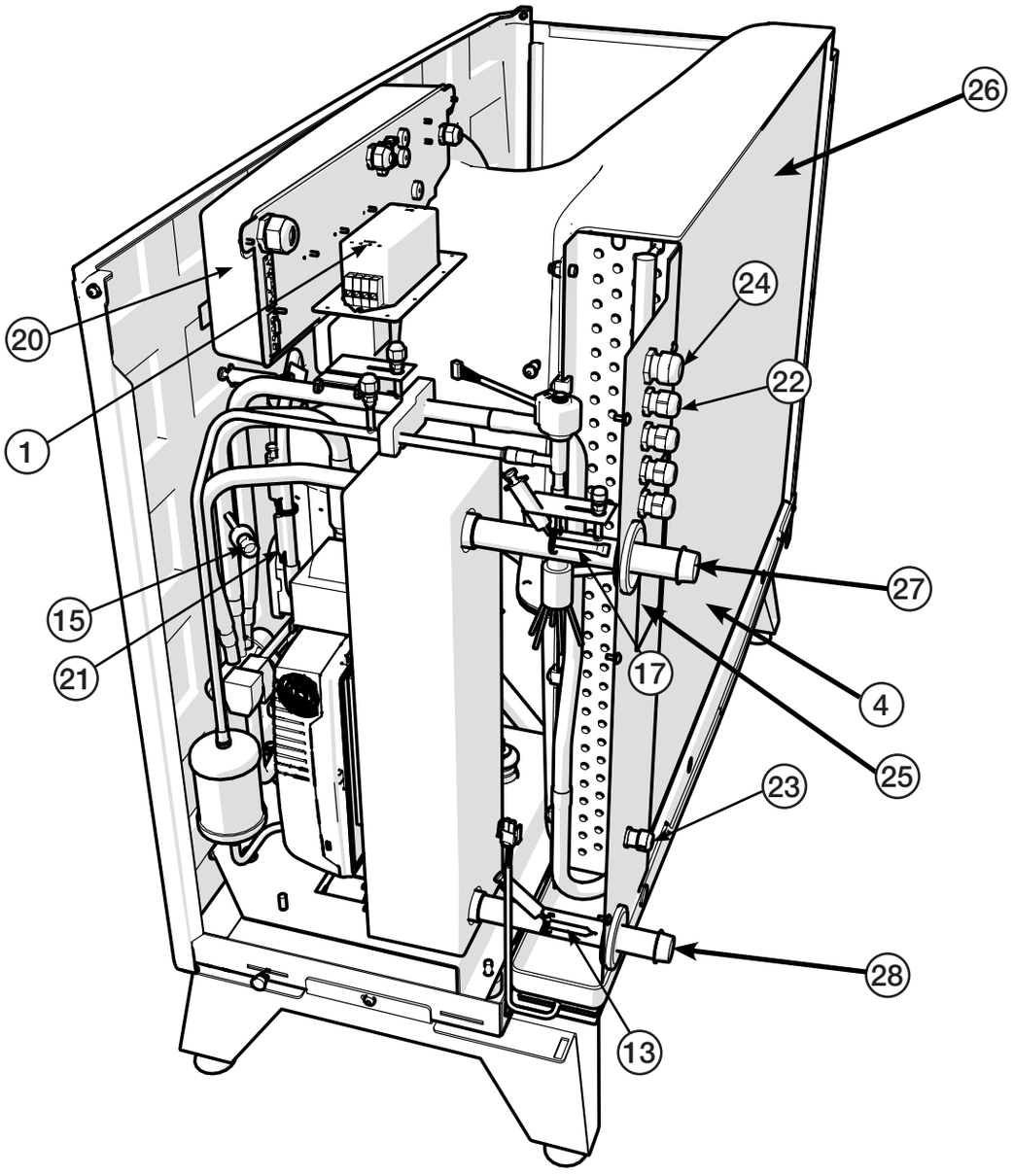


1.5 Component location

Component location CTC EcoAir 510M



Component location CTC EcoAir 510M



1. EMI filter
2. Fan
3. Frequency converter
4. Defrosting sensor in evaporator
5. Type plate with serial number etc.
6. Compressor
7. High pressure switch
8. Suction gas sensor
9. High pressure sensor
10. Compressor heater
11. 4-way valve
12. Drying filter
13. Return sensor
14. Heat exchanger
15. Low pressure sensor
16. Primary flow sensor
17. Bleeding nipple/water
18. Expansion valve
19. Connection box
20. Communication
21. Hot gas sensor
22. Communication product
23. Outdoor sensor
24. Power supply
25. Serial number
26. Evaporator
27. Primary flow Ø28 mm
28. Return flow Ø28 mm
29. Spool

2. Installation

This chapter is aimed at anyone responsible for one or more of the installations required to ensure that the product works the way the property owner wants.

Take your time going through functions and settings with the property owner and answer any questions. Both you and the heat pump benefit from a user who has completely understood how the system operates and should be maintained.

The installation must be carried out in accordance with current MCS standards. Refer to MIS 3005 and associated building regs Part L,F & G.

2.1 Important to remember

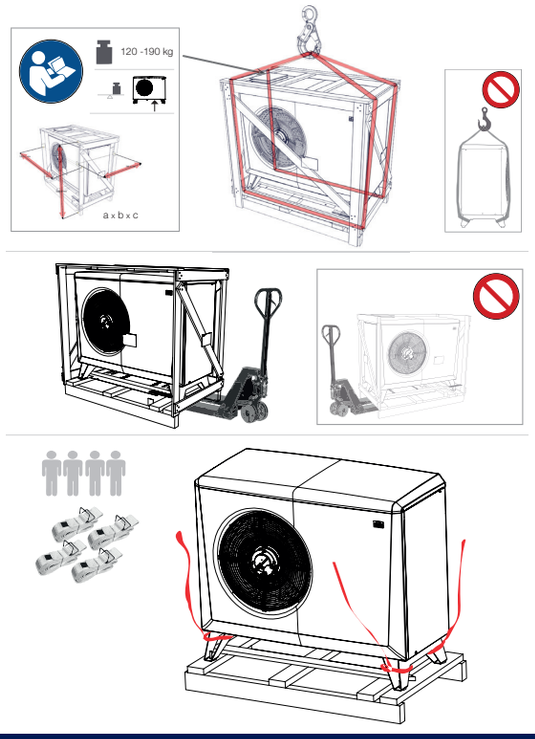
Check the following points in particular at the time of delivery and installation:

- The product must be transported and stored in an upright position. Transport the unit to the installation site before removing the packaging.
- Remove the packaging and check before installation that the product has not been damaged in transit. Report any transport damage to the carrier.
- Handle the product with a forklift if possible, or lifting straps around the pallet, NOTE! Can only be used with the packaging on.
- The installation should be preceded by an omnipolar switch.
- If there already is a ground fault breaker, the CTC EcoAir must also be fitted with its own ground fault breaker with on/off delay.

> The installation should be preceded by an omnipolar switch.
> If there already is a ground fault breaker, the CTC EcoAir must also be fitted with its own ground fault breaker with on/off delay.

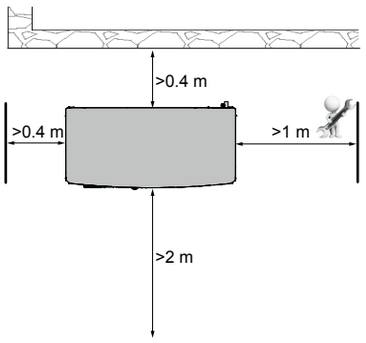
2.2 Delivery includes

- 1 x Heat pump CTC EcoAir 510M
- 15 m cable LiYCY (TP) with connector for communication, fitted.
- 2 m power cable, fitted.



2.3 Placement of the heat pump

- CTC EcoAir 510M is normally placed against an outside wall.
- The CTC EcoAir 510M has a factory-fitted condensation water tray where the condensation water is conducted to a stone curb, surface water gully, down pipe or other drainage. You should therefore consider the position of the product..
- If the condensation water pipe is not used, the foundation must be such that condensing water and melted snow can drain into the ground. Make a 'stone curb' under the heat pump. Remove 70-100 cm and fill up with crushed stones to obtain the best possible drainage.
- There should be a space of at least 400 mm between the heat pump and the wall so that outdoor air can pass freely in through the evaporator.
- Allow a space of at least 2 metres between the heat pump and any bushes etc.
- Place the heat pump so that noise from the compressor and fan does not disturb the surroundings.
- Do not place the heat pump right next to a bedroom window, patio or fence.
- Take the distance to the nearest neighbour into account by studying the noise data in the “technical data” chapter.
- The stand must stand stably on concrete blocks or similar.
- Use a spirit level to adjust the unit, so that it is completely level.
- Due to the design of the stand and the weight of the pump, it is not necessary to mount the unit to the ground or the wall.
- Installing the heat pump in a sheltered spot is inadvisable, and so is placing it in an outhouse or car port, because the air should flow as freely as possible through the heat pump and used air should not to be sucked into the inlet on the back. This can cause abnormal ice formation in the evaporator.
- If the product positioned so that it is exposed to extra harsh weather conditions, then a smaller porch might be justified.



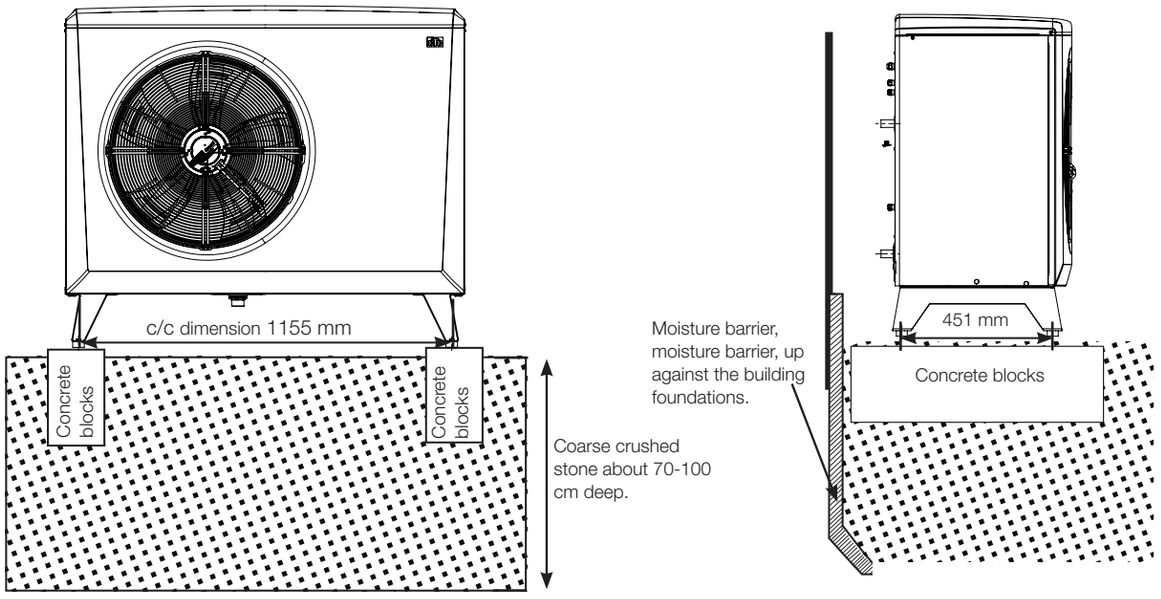
Recommended free distance around the product.

These guidelines must be followed in order for your CTC EcoAir 510M to give the optimal performance

2.4 Preparation and drainage

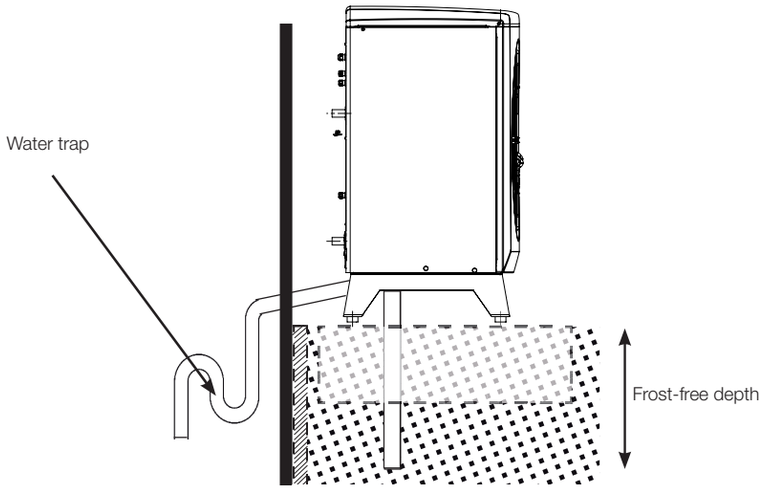
The heat pump should be positioned so that the house cannot be damaged and the condensation water can easily drain into the ground. The foundation should be of concrete blocks or similar, resting on crushed stones or gravel.

- Make a 'stone curb' under the heat pump. Remember that there may be up to 70 litres of condensation water a day under some conditions.
- Make a 70 – 100 cm deep hole.
- Place a moisture barrier in the hole on the side against the foundations of the building
- Half fill the hole with crushed stones and lay concrete blocks or similar.
- Mark up the c/c dimension (1155 mm) between the blocks to match the span of the heat pump stand.
- Use a spirit level to ensure that the blocks are level.
- Place crushed stones around the blocks to achieve optimal drainage.



2.5 Condensation water

- The condensation tray is built into the heat pump and is used to divert most of the condensation water. The tray can be connected to a suitable drain. Connection diameter: 42mm.
- A heating cable (available as an accessory) should be placed in the pipe to prevent refreezing. The heating cable is connected to the electrical cabinet in the CTC EcoAir 510M. (Must be performed by an authorised electrician and according to applicable provisions.)
- If the house has a cellar, it is advisable to route the condensation water to a floor drain indoors (to be performed according to the applicable rules). The pipe should be installed with a slope towards the house and above the ground (so no other water can get into the cellar). Wall apertures should be sealed and insulated A water trap must be connected to the inside to prevent air from circulating in the pipe.
- If there is a stone curb, the outlet from the condensation water pipe should be placed at a frost-free depth.
- The condensation water may also be routed into the house drains, e.g. from the downpipes. Here a heating cable must be placed in the pipes that are not frost-free.



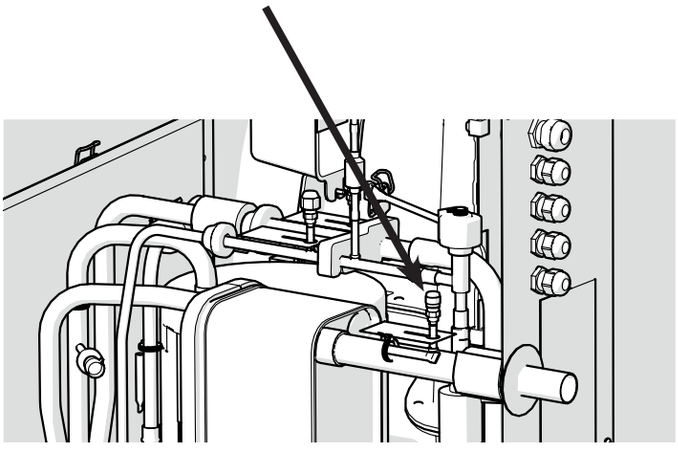
3. Pipe installation

The installation must be carried out in accordance with current MCS standards. Refer to MIS 3005 and associated building regs Part L,F & G. The boiler must be connected to an expansion vessel in an open or closed system. Do not forget to flush the radiator system clean before connection.

! Do not forget to flush the radiator system clean before connection.

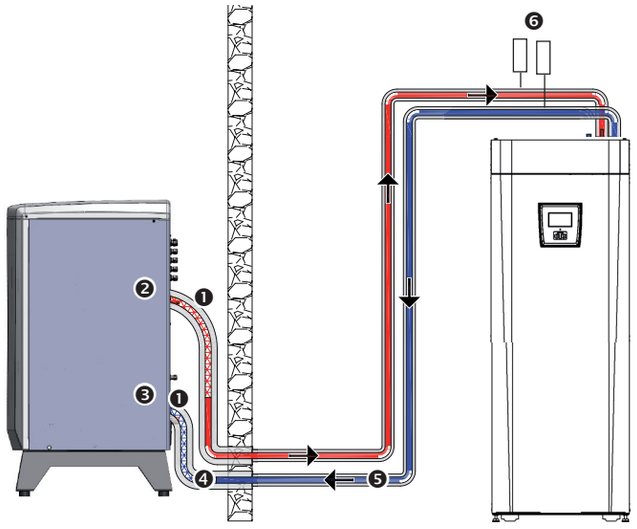
3.1 Pipe connection

- Pipes of at least:
  22 mm copper pipe for CTC EcoAir 510M and
  28 mm copper pipe(CTC EcoAir 520M)
  is connected to the heat pump.
  In the event of high pressure drops, due to long pipe installation etc., the circulating pump (G11) can be replaced with CTC item no. 586988301 (15-75 130) in order to manage the flow requirements.
- Route the pipes between the heat pump and the boiler without any highest points. If this cannot be done, provide this highest point with an automatic air separator or an in line aerator.
- Flexible hoses should be installed closest to the heat pump. Outdoor pipes should be thoroughly insulated with weather-proof insulation.
- The connection to the heat pump should be made with a wire-reinforced diffusion-tight hose for hot water, min. 1” diameter (available as an accessory). A minimum of 600 mm flexible hose is required to prevent noise transmission into the property and allow movement of the heat pump.
- Pipes installed outside should be insulated with at least 13 mm thick pipe insulation which is not sensitive to water. Ensure that the insulation is sealed tightly everywhere and that joints are thoroughly taped or glued.
- Indoor pipes should be insulated as far as the boiler with at least 9 mm thick insulation. This is to enable the heap pump to deliver the highest possible temperature to the boiler or tank without any losses.
- The product can be bled via the bleed valve inside the condenser.
  NOTE! Only bleed this valve. Other valves are for the cooling system! If these are opened, refrigerant may leak out!



3.2 Example of connection to CTC EcoZenith i250 L

The CTC EcoZenith i 250 L has pipes at the rear right edge for connection of the heat pump. The heat pump's lower connection is connected to the right connection when viewed from the front, so that water is pumped out to the heat pump. The heat pump's upper connection is thus connected to the right connection.



1. Wire-reinforced diffusion-tight hose for hot water, min. 1". Hose length 600 mm from the unit.
2. Primary flow, outgoing (heated) water Ø28 mm connection on the condenser.
3. Return line, incoming (cold) water Ø28 mm connection on the condenser.
4. Minimum Ø22mm copper pipe insulated outside with 13 mm thick insulation.
5. Inside piping is insulated with 9 mm thick insulation.
6. Bleeder.

EcoAir/EcoZenith i250 H

On the CTC EcoZenith i250 H, the heat pump is connected directly to the charge pump located under the tank. The heat pump's lower connection must be connected to the charge pump so that water is pumped out to the heat pump. The heat pump's upper connection is connected to the right diverting valve by the charge pump.

3.3 Circulating pump – heat carrier

The pump transports the heat from EcoAir to CTC EcoZenith. If the outdoor temperature is below +2°C the pump runs constantly to eliminate any risk of freezing.

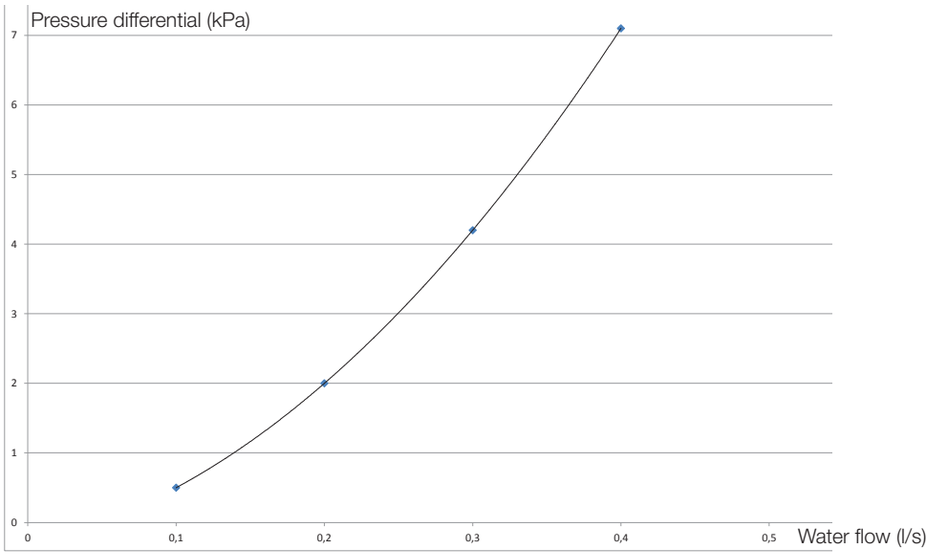
If the product installed at a facility where power outages can occur, then it is advisable to supplement with an emergency power generator for the charge pump. It is also possible to install mechanical frost protection.

The product used for control monitors and ensures that the heat pump works within its operating range.

Autocalibration / Tuning

Autocalibration of the pump's speed is performed under the heat pump settings in CTC EcoZenih i250.

3.4 Pressure differential diagram CTC EcoAir 510M



4. Electrical installation

The installation and heat pump connection shall be done by an authorised electrician. All wiring must be installed according to applicable provisions. Before the front panel is opened or other live components are made accessible, the power supply to the heat pump absolutely must be disconnected.

CTC EcoAir 510M 400V 3N~ can only be connected to the indoor unit CTC EcoZenith i250.

Omnipolar safety switch

The installation should be preceded by an omnipolar safety switch according to overvoltage category III, which ensures disconnection from all electric power sources.

If there already is a ground fault breaker, the CTC EcoAir must also be fitted with its own ground fault breaker with on/off delay.

4.1 Electrical installation 400 V 3N~

The CTC EcoAir 510M must be connected to 400V 3N~ 50 Hz and protective earth.

The 2 m long power supply cable is pre-connected to the product.

4.2 Communication connections

The communication cable used is the provided LiYCY (TP) which is a 4-conductor shielded cable, where the communication-bearing conductors are of twisted pair type.

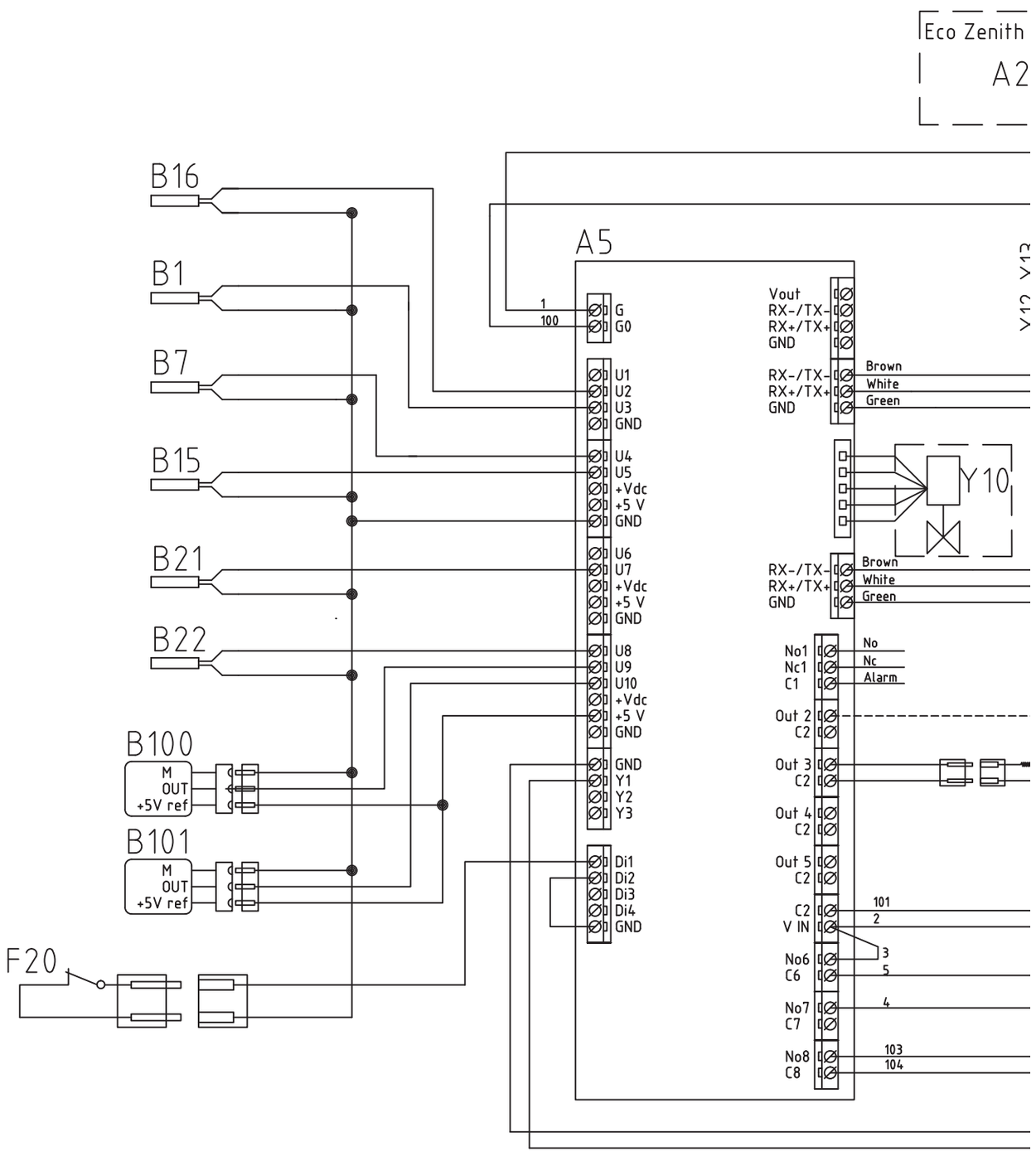
When connecting CTC EcoAir 510M to CTC EcoZenith i250, connect the communication cable (LiYCY (TP)) directly to the product.

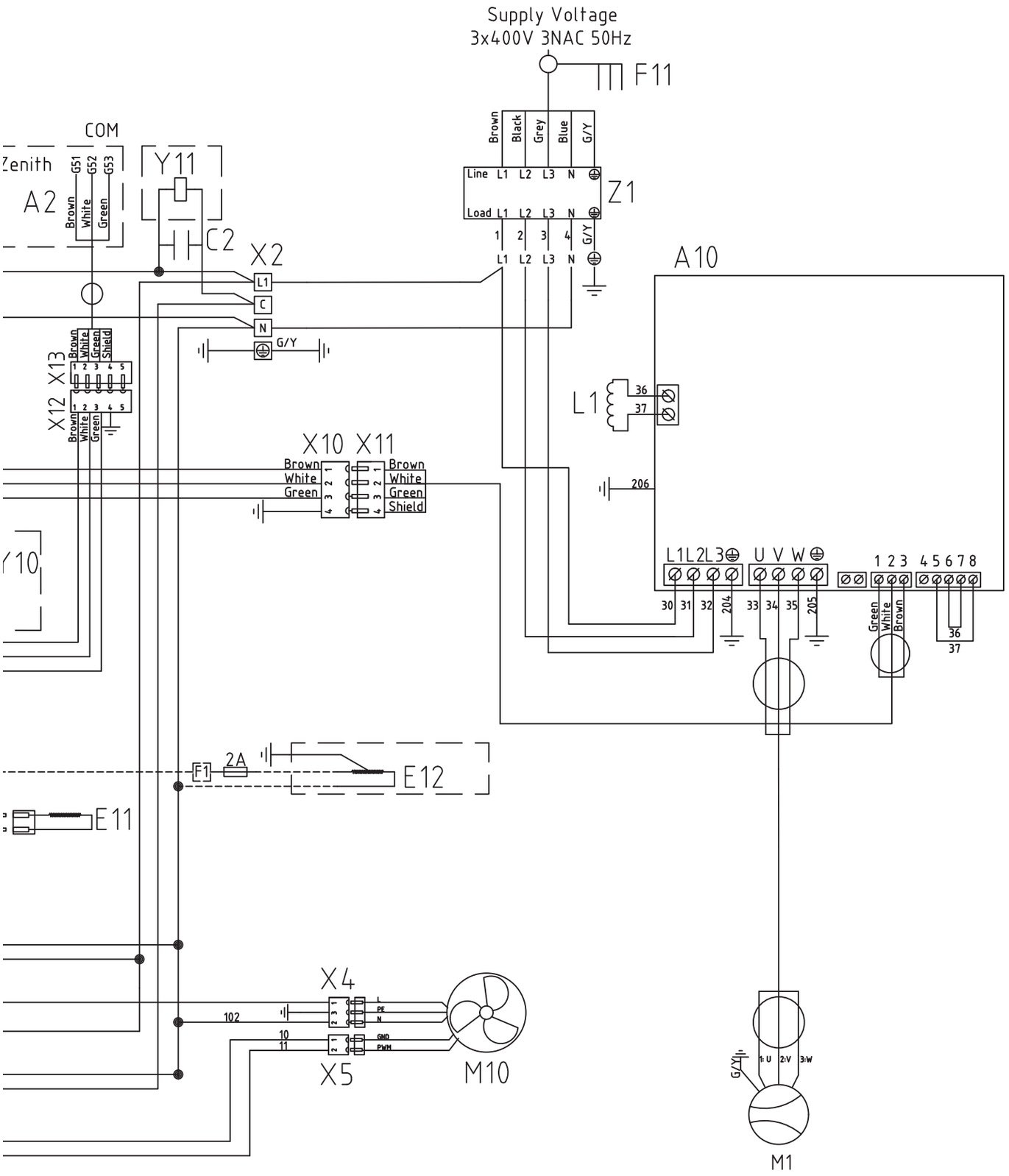
4.3 Compressor heater

The compressor heater automatically heats up when the compressor is cold.

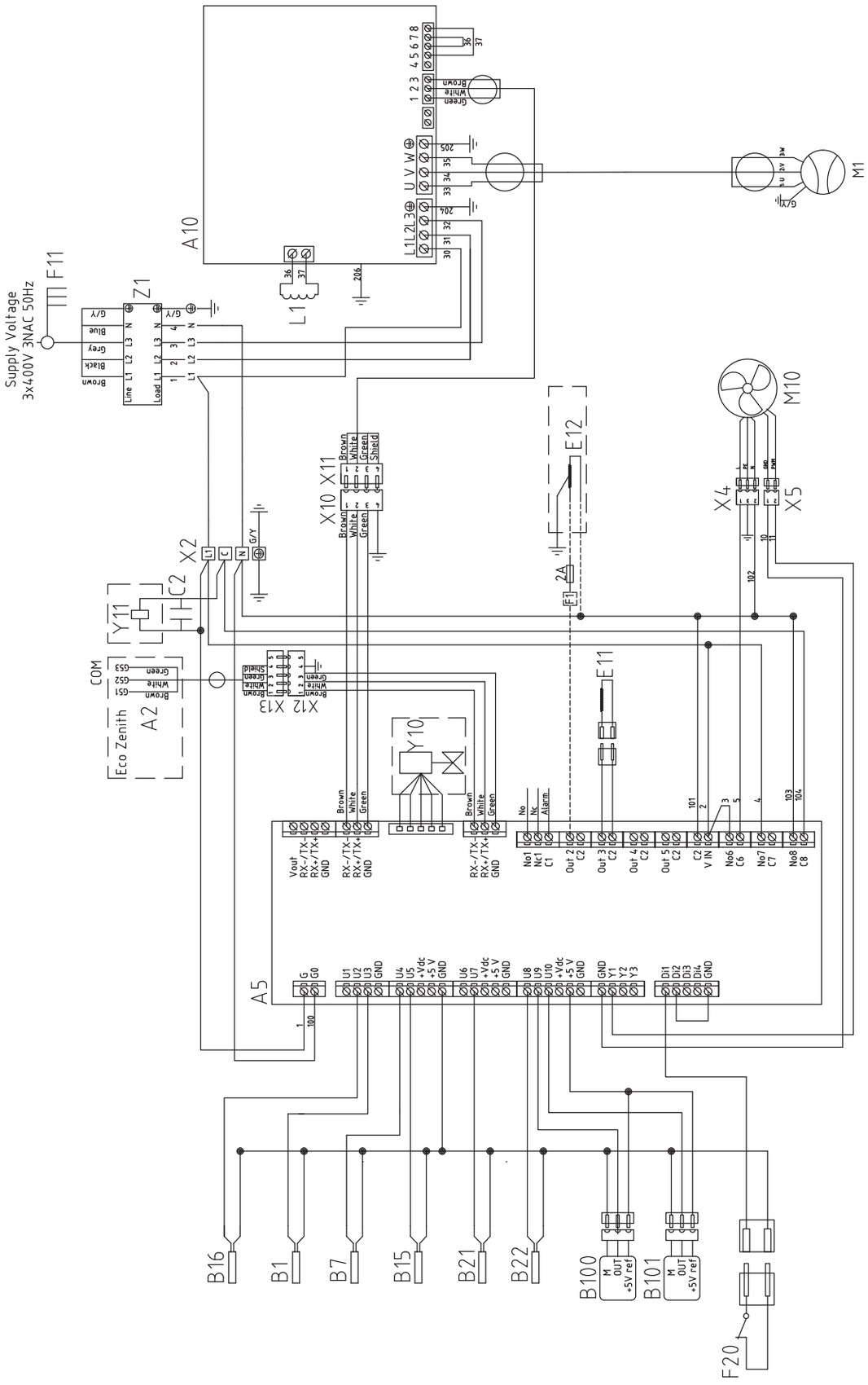
The compressor heater is pre-connected on delivery.

4.4 Wiring diagram 400 V 3N~ (A3)




Supply Voltage
3x400V 3NAC 50Hz
F11
Brown
Black
Grey
Blue
G/Y
Line L1 L2 L3 N
Z1
Load L1 L2 L3 N
1 2 3 4 G/Y
L1 L2 L3 N
COM
Zenith
G51
G52
G53
A2
Brown
White
Green
Y11
C2
X2
L1
C
N
G/Y
A10
Brown
White
Green
Shield
X13
X12
L1
36
37
206
X10 X11
Brown
White
Green
Shield
L1 L2 L3
U V W
1 2 3 4 5 6 7 8
30 31 32 204 33 34 35 205
Green
White
Brown
36
37
F1
2A
E12
E11
X4
102
10
11
L
PE
N
GND
PWM
X5
M10
G/Y
1: U
2: V
3: W
M1

4.5 Wiring diagram 400 V 3N~ (A4)



4.6 Parts list

A1	Display PCB (CTC EcoZenith)	
A2	Relay/main card	
A5	Heatpump control board	
A10	Frequency converter	
B1	Primary flow sensor	NTC 22
B7	Return sensor	NTC 22
B15	Outdoor sensor	NTC 22
B16	Defrosting sensor	NTC 22
B21	Hot gas sensor	
B22	Suction gas sensor	NTC 015
B100	High pressure sensor	
B101	Low pressure sensor	
C1	Condenser compressor (1-phase)	
C2	Condenser	
E10	Compressor heater	
E11	Condenser tray heater	
E12	Heating cable (option)	
F1	Fuse (option)	
F11	Omnipolar switch	
F20	High pressure switch	
L1	Spool	
M1	Compressor	
M10	Fan	
X1	Terminal block	
XM1	Connector supply Male	
XM2	Connector supply Female	
XC1	Connector compressor Male	
XC2	Connector compressor Female	
Y10	Expansion valve	
Y11	Solenoid valve	
Z1	EMC filter	

4.7 Sensor Data

NTC 22 kΩ

Temperature °C	NTC 22 kΩ Resistance Ω
130	800
125	906
120	1027
115	1167
110	1330
105	1522
100	1746
95	2010
90	2320
85	2690
80	3130
75	3650
70	4280
65	5045
60	5960
55	7080
50	8450
45	10130
40	12200
35	14770
30	18000
25	22000
20	27100
15	33540
10	41800
5	52400
0	66200
-5	84750
-10	108000
-15	139000
-20	181000
-25	238000

Hot gas sensor

Temperature °C	Hot gas sensor Resistance Ω
130	1449
125	1650
120	1882
115	2156
110	2477
105	2849
100	3297
95	3831
90	4465
85	5209
80	6115
75	7212
70	8560
65	10142
60	12125
55	14564
50	17585
45	21338
40	25986
35	32079
30	39611
25	48527
20	60852
15	76496
10	98322
5	125779

Suction gas sensor

Temperature °C	Suction gas NTC 015 Resistance Ω
40	5830
35	6940
30	8310
25	10000
20	12090
15	14690
10	17960
5	22050
0	27280
-5	33900
-10	42470
-15	53410
-20	67770
-25	86430

5. First start

1. Check that the boiler and system are full of water and have been bled.
2. Check that all connections are tight.
3. Check that sensors and the charge pump are connected to the power source.
4. Energise the heat pump by switching on the operating switch (the main switch).

Once the system has heated up, check that all connections are tight, the various systems have been bled, heat is coming out into the system and warm water is coming out at the tap locations.

6. Operation and Maintenance

When the installer has installed your new products, you should check along with the installer that the system is in perfect operating condition. Let the installer show you where the power switches, controls and fuses are so that you know how the system works and how it should be maintained. Bleed the radiators (depending on type of system) after around three days of operation and top up with water if required.

Defrosting

The CTC EcoAir 510M is fitted with hot gas defrosting. The heat pump checks constantly whether defrosting is needed and, if so, defrosting starts, the fan stops, the four-way valve changes direction and the hot gas goes to the evaporator instead. A hissing sound is heard as the water drains from the evaporator. There may be large amounts of water. When the product has defrosted, the fan starts and the hot gas goes into the condenser instead, and the heat pump returns to normal operation.

Modulating compressor

The power in the heat pump is adapted using modulating operation according to the actual energy requirement. The compressor runs constantly with the correct power and thereby minimises the number of start and stop periods. The modulating power regulation provides optimal efficiency.

The fan

The fan starts 15 seconds before the condenser and runs until the compressor stops. During defrosting the fan stops and restarts when defrosting is finished. The fan is speed-controlled and follows the need for power.

Maintenance

A large amount of air passes through the evaporator. Leaves and other debris can get stuck and restrict the air flow. At least once year the evaporator coil should be checked and cleared of particles that block the air flow. The evaporator and outer covering should be cleaned with a damp cloth or soft brush. No other periodic maintenance or inspection is necessary.

Periodic maintenance

After three weeks' operation and then every three months during the first year. Then once a year:

- Check that the installation is free of leaks.
- Check that the product and system are free of air; bleed if needed.
- Check that the evaporator is clean.
- No annual leakage control of the refrigerant is required

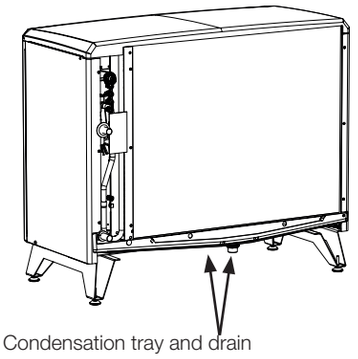
Operation stop

The heat pump is shut down using the operating switch. If there is a risk of the water freezing, ensure that there is circulation, or drain out all the water from the heat pump.

Condensation water tray

The condensation water tray collects water formed on the EcoAir's evaporator during operation and defrosting. The condensation water tray is equipped with an electric heating coil which keeps the tray free of ice when it is freezing outside. The condensation water tray is located at the bottom on the back of EcoAir. By lifting the handle on the cover plate and pulling it out, you can clean and inspect the condensation tray.

As an accessory you can buy a heating cable to connect to EcoAir. The cable is fitted in the drain from the condensation tray to the frost-free drain.



Condensation tray and drain

7. Troubleshooting/appropriate measures

The CTC EcoAir 510M is designed to provide reliable operation and high levels of comfort, and to have a long service life. Various tips are given below which may be helpful and guide you in the event of an operational malfunction.

If a fault occurs, you should always contact the installer who installed your unit. If the installer believes the malfunction is due to a materials or design fault, then they will contact Enertech AB to check and rectify the issue. Always provide the product's serial number.

Air problems

If you hear a rasping sound from the heat pump, check that it is properly bled. Top up with water where required, so that the correct pressure is achieved. If this noise recurs, call a technician to check the cause.

Alarms

Any alarms and information texts from the CTC EcoAir 510M are displayed in the product which is used to control it; you should therefore consult the manual for that product.

Circulation and Defrosting

If the circulation between the indoor and the outdoor unit is reduced or stops, the high pressure switch is triggered. Possible reasons for this:

- Defective circulating pump/Circulating pump too small
- Air in the pipes
- Condenser reset
- Other intermediate obstructions to the water flow

During defrosting the fan stops but the compressor operates and the melted snow and ice flows into the condensation tray under the heat pump. When defrosting stops, the fan starts again and initially a vapour cloud, consisting of damp air which condenses in the cold outdoor air, is created. This is perfectly normal and stops after a few seconds. If the pump heats poorly, check that no unusual ice formation has occurred. Possible reasons for this:

- Defective defrosting automation
- Lack of refrigerant (leakage)
- Extreme weather conditions.

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CE

Försäkran om överensstämmelse
Déclaration de conformité
Declaration of conformity
Konformitätserklärung

försäkrar under eget ansvar att produkten,
confirme sous sa responsabilité exclusive que le produit,
declare under our sole responsibility that the product,
erklären in alleiniger Verantwortung, dass das Produkt,

CTC EcoAir 510M 400V 3N~ + CTC EcoZenith i250

som omfattas av denna försäkran är i överensstämmelse med följande direktiv,
auquel cette déclaration se rapporte est en conformité avec les exigences des normes suivantes,
to which this declaration relates is in conformity with requirements of the following directive,
auf das sich diese Erklärung bezieht, konform ist mit den Anforderungen der Richtlinie,

EC directive on:

Pressure Equipment Directive (PED) 97/23/EC, Modul A.

Electromagnetic Compatibility (EMC) 2004/108/EC.

Low Voltage Directive (LVD) 2006/95/EC.

Ecodesign Directive 2009/125/EC
(regulations (EU) 811/2013, 812/2013, 813/2013, 814/2013 where applicable)

Överensstämmelsen är kontrollerad i enlighet med följande EN-standarder,
La conformité a été contrôlée conformément aux normes EN,
The conformity was checked in accordance with the following EN-standards,
Die Konformität wurde überprüft nach den EN-normen,

EN60335-1: 2002, A1:2005, A2:2006, A11:2004, A12:2006, A13:2009, A14:2010, A15:2011.

EN60335-2-40:2003, A2:2009, A11:2004, A12:2005, A13:2012

EN62233:2008

EN55014-1:2007, A1:2009, A2:2011

EN55014-2:1997, A1:2001, A2:2008

EN61000-3-12:2011,

EN61000-3-11:2000

EN61000-4-2, -3, -4, -5, -6, -11

Detailed ecodesign information can be downloaded at: www.ctc.se/ecodesign

Ljungby 2016-02-25

Joachim Carlsson

Technical Manager

162 105 63-1 2016-03-17

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