

CTC



CTC EcoAir 510M-520M

Variable-speed air-to-water heat pumps. 2-22 kW



CTC EcoAir 500M series of ultra-efficient, variable-speed air-to-water heat pumps which automatically adapt to the heating needs of houses, properties or small industrial premises during the year. When a lot of output is required, the output increases. When less output is required, the compressor shifts to lower output. Thanks to this you will always achieve maximum savings.

CTC EcoAir 500 is optimised to make the best possible use of eco-friendly energy in the air. It converts energy in the air into heating and hot water, and does not require boreholes or coils in the ground. CTC EcoAir 500 has automatic defrosting which results in more heat, greater output and a longer service life. CTC EcoAir 500 is, of course, fitted with a heated condensation water tray.

CTC EcoAir 500 should always be installed with one of our indoor modules or Logic control units, we recommend CTC EcoZenith i350 for regulation and hot water. To make heating and hot water adjustment easy, our indoor modules have colour touchscreens.

The CTC EcoZenith i350 indoor module is equipped with a highly efficient water heater, which produces over 300 litres of hot water. If you use a lot of water, you can connect CTC EcoAir 500 to the CTC EcoZenith i550 Pro multi-tank. It has a hot water capacity of more than 600 litres, which is enough for 15 shower-loving teenagers. If the energy requirement is particularly large, up to ten pumps can be run together. If you would like to connect CTC EcoAir 500 to your existing installation, just add the CTC EcoLogic Pro/Family control module. A unique control system that monitors and regulates the CTC's heat pumps, solar panels, additional heating, buffer tank, swimming pool, cooling, etc. for up to four different heating systems.

All CTC heat pumps and boilers are designed, developed and manufactured in our factory in Ljungby. This gives us total control of all stages of the production process – from manufacturing to delivery of the finished product.

Benefits:

- Best Energy class A+++
- Produces up to 80 % lower heating costs.
- Heat pump with low noise level
- Highest seasonal coefficient of performance: 4.6 SCOP
- Provides heating down to -22 °C and produces water up to 65 °C
- Inverter-controlled compressor
- Built-in condensation water tray.
- Can be controlled from a smartphone with CTC Connect+



ENERGY
FLEX

Find a CTC distributor in your country
www.ctc-heating.com

Control units compatible with CTC EcoAir 510M-520M - refer to individual product sheets for more detailed information



CTC EcoZenith i350L/H

Indoor module with ultra-efficient water heating. Extremely well insulated with heat exchanger. Factory-assembled charge pump and installation package.

Low: 1,666 mm Top connection

High: 1,924 mm Bottom connection

CTC EcoZenith i250L/H

Indoor module with EnergyFlex. Flexible system tank with heat pump regulation and hot water coil. Charge pump included.

Low: 1,654 mm Top connection

High: 1,904 mm Top connection

CTC EcoLogic Pro/Family*

EnergyFlex heating system control. A unique control system that monitors and controls CTC's heat pumps, solar panels, external additional heat sources, additional tanks, pools, passive cooling, etc.

The CTC EcoLogic Pro/Family automatically handles the connection/disconnection of the existing boiler and prioritises hot water production or heating.

Pro: Able to control ten CTC heat pumps in four heating systems.

Family: Able to control two CTC heat pumps in two heating systems.

* Only for CTC EcoAir 520M & 510M 1x230 V



CTC EcoZenith i550 Pro*

Intelligent multi-tank with EnergyFlex. All-in-one tank able to control three heat pumps in three different heating systems, with integrated solar control and two hot water coils.

CTC EcoZenith i550 Pro has a hot water capacity of more than 600 litres, but is only 1700 mm high, facilitating its installation in spaces with low ceiling heights.

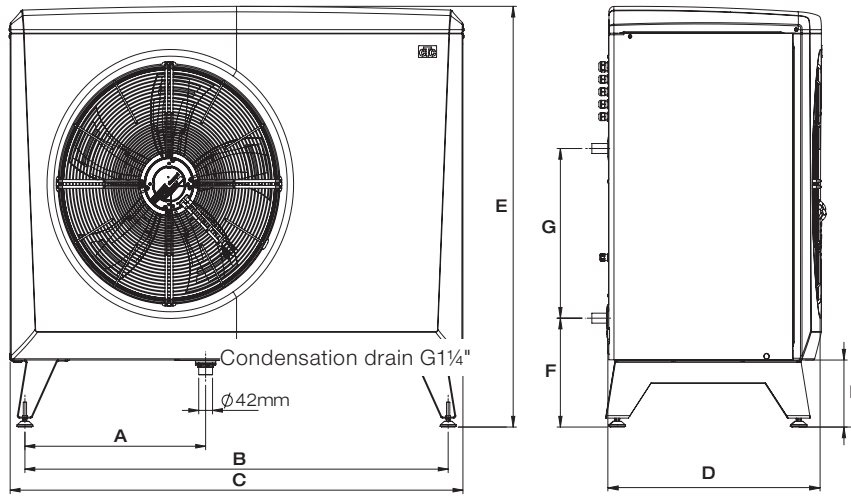
* Only for CTC EcoAir 520M & 510M 1x230 V

Accessories

		CTC no.:
CTC Installation Kit EcoAir	Frost protection. Flexible hoses with insulation and connections for the heat pump	586534402
Communication cable 10 m	For when the control unit and heat pump are far apart	586041401
CTC Charge pump 25/7.5-130	Suitable for CTC EcoAir 510M	586396303
CTC Charge pump 25/8.5-130	Suitable for CTC EcoAir 520M	586396301
Heating cable 5 m	Frost protection kit for condensation pipe incl. 5 m cable. (terminal block: 586394401)	586685401
Flow meter G25	For measuring and adjusting the water flow. (Insulated clamp: 586683411)	586683401
CTC Rain Cover EA Ø500	Rain cover for CTC EcoAir 510M	586997301
CTC Rain Cover EA Ø630	Rain cover for CTC EcoAir 520M	586997302

Dimensions diagram

CTC EcoAir 3x400V	A	B	C	D	E	F	G	H
510M	486	1155	1245	530	1080	301	476	188
520M	551	1285	1375	610	1180	301	476	188



Included in the delivery:
Heat pump, 15 m communication cable (Modbus), connector for power supply and communication.

Recommended accessories:
Installation Kit EcoAir 586534402
Frost protection. Flexible hoses with insulation and connections for the heat pump.

Compatible control modules:
510M CTC EcoZenith i350 H/ L
510M CTC EcoZenith i250 H/ L
510/520M CTC EcoZenith i550 Pro
510/520M CTC EcoLogic Pro/ Family

Technical data 3x400V		510M	520M
CTC no.		587600001	586900001
Weight (excl./incl. packaging)	kg	126 / 150	186 / 210
Dimensions (width x depth x height)	mm	1245 x 545 x 1080	1375 x 610 x 1180
Electrical data		400V 3N~ 50Hz	
Rated current	A	10.6	19.1
Energy efficiency class for heating system @ 35/55 °C (+EZi350) ¹⁾		A+++ / A++	A+++ / A++
Energy efficiency class @ 35/55 °C		A++ / A++	A++ / A++
Specified output @ 100 rps	kW	10.98	21.80
Protection class	IP	IP24	
Nominal heating output (P _{designh}) @ moderate climate 35/55 °C	kW	6 / 7	8 / 9
Nominal heating output (P _{designh}) @ cold climate 35/55 °C	kW	4 / 8	11 / 10
COP @ W 35 °C & A +7 @ 20 rps / -7 °C @ 90 rps. (EN14511)		5.31 / 2.78	5.24 / 2.71
SCOP moderate climate 35/55 °C (EN 14825)		4.6 / 3.4	4.5 / 3.5
SCOP cold climate 35/55 °C (EN 14825)		3.5 / 2.9	3.8 / 3.1
Refrigerant quantity (R407C, GWP 1774)	kg	2.2	2.7
CO ₂ equivalent	tonnes	3.903	4.789
Airflow 100 %	m ³ /h	3800	6200
Sound power L _{WA} (EN 12102 @ A7 W47/55 & A7 W30/35) ²⁾	dB(A)	55.9 / 53.5	60.5 / 55.4
Sound pressure L _{pA} 5m (EN 12102 @ A7 / W35) ²⁾	dB(A)	30-33	32-35
Sound pressure L _{pA} 10m (EN 12102 @ A7 / W35) ²⁾	dB(A)	24-27	26-29

¹⁾ The reported efficiency in heating system takes into account the product's temperature regulator.

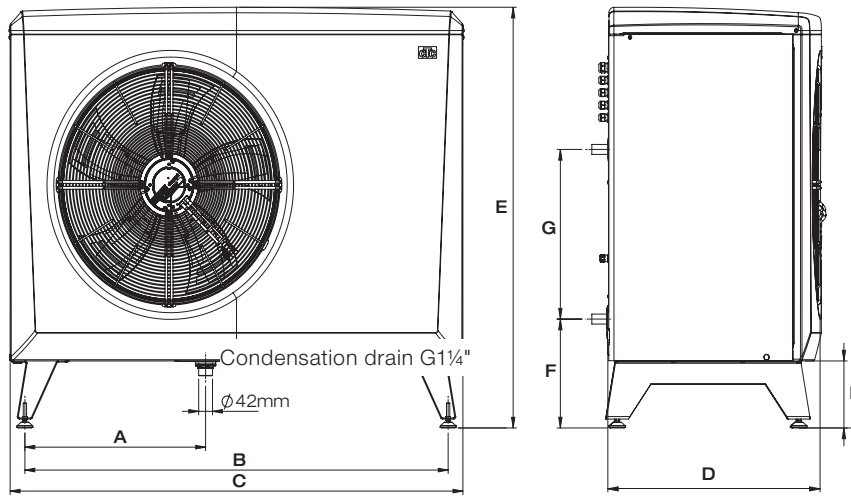
Energy labeling decals can be easily downloaded at www.ctc-heating.com/Ecodesign.

²⁾ The sound specified should be regarded as an indication since the level is affected by the speed of the compressor and fan, as well as the surroundings.

The upper value corresponds to 100 % reflective ground and walls (smooth concrete).

Dimensions diagram

CTC EcoAir 1x230V	A	B	C	D	E	F	G	H
510M	486	1155	1245	530	1080	301	476	188



Included in the delivery:

Heat pump, 15 m communication cable (Modbus), connector for power supply and communication.

Recommended accessories:

Installation Kit EcoAir 586534402
Frost protection. Flexible hoses with insulation and connections for the heat pump.

Compatible control modules:

510M CTC EcoZenith i350 H/ L
510M CTC EcoZenith i250 H/ L
510/520M CTC EcoZenith i550 Pro
510/520M CTC EcoLogic Pro/ Family

Technical data 1x230V		510M
CTC no.		587601001
Weight (excl./incl. packaging)	kg	119 / 148
Dimensions (width x depth x height)	mm	1245 x 545 x 1080
Electrical data		230V 1N~ 50Hz
Rated current	A	20.8
Energy efficiency class for heating system @ 35/55 °C (+EZi350) ¹⁾		A+++ / A++
Energy efficiency class @ 35/55 °C		A++ / A++
Output range	kW	2-10
Specified output @ 100 rps	kW	10.98
Protection class	IP	IP24
Nominal heating output (P _{designh}) @ moderate climate 35/55 °C	kW	4 / 8
Nominal heating output (P _{designh}) @ cold climate 35/55 °C	kW	6 / 6
COP @ W 35 °C & A +7 @ 20 rps / -7 °C @ 90 rps. (EN14511)		4.67 / 2.73
SCOP moderate climate 35/55 °C (EN 14825)		4.3 / 3.2
SCOP cold climate 35/55 °C (EN 14825)		3.9 / 3.0
Refrigerant quantity (R410A, GWP 1774)	kg	2.8
CO ₂ - equivalent	tonnes	4.594
Airflow 100 %	m ³ /h	3800
Sound power L _{WA} (EN 12102 @ A7 W47/55 & A7 W30/35) ²⁾	dB(A)	59.7 / 55.6
Sound pressure L _{pA} 5m (EN 12102 @ A7 / W35) ²⁾	dB(A)	37-40
Sound pressure L _{pA} 10m (EN 12102 @ A7 / W35) ²⁾	dB(A)	30-33

¹⁾ The reported efficiency in heating system takes into account the product's temperature regulator.

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²⁾ The sound specified should be regarded as an indication since the level is affected by the speed of the compressor and fan, as well as the surroundings.

The upper value corresponds to 100 % reflective ground and walls (smooth concrete).