Subtype CTC EcoAir 510M 1x230V	
Certificate Holder	CTC AB
Address	Box 309, Näsvägen
ZIP	SE-341 26
City	Ljungby
Country	SE
Certification Body	RISE CERT
Subtype title	CTC EcoAir 510M 1x230V
Registration number	012-061
Heat Pump Type	Outdoor Air/Water
Refrigerant	R410A
Mass of Refrigerant	2.2 kg
Certification Date	11.12.2023
Testing basis	EN 14511:2013, EN 14825:2013, EN 12102:2013
Testing laboratory	RISE Research Institutes of Sweden

Model CTC EcoAir 510M 1x230V	
Model name	CTC EcoAir 510M 1x230V
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Colder Climate
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data	
Power supply	1x230V 50Hz
Off-peak product	No

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	6.21 kW	5.76 kW
El input	1.39 kW	2.07 kW
COP	4.46	2.79

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	60 dB(A)	60 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
ηs	171 %	125 %
Prated	4.30 kW	8.00 kW
SCOP	4.40	3.20
Tbiv	-10 °C	-8 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	3.90 kW	7.00 kW
COP Tj = -7°C	2.92	7.95
Cdh Tj = -7 °C		
Pdh Tj = +2°C	2.50 kW	4.40 kW
COP Tj = +2°C	4.70	3.14
Cdh Tj = +2 °C		
Pdh Tj = +7°C	2.60 kW	2.80 kW
COP Tj = +7°C	5.93	4.63
Cdh Tj = +7 °C		

Pdh Tj = 12°C	1.30 kW	2.90 kW
COP Tj = 12°C	7.59	6.17
Cdh Tj = +12 °C		
Pdh Tj = Tbiv	4.30 kW	7.20 kW
COP Tj = Tbiv	2.62	1.84
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.30 kW	6.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.62	1.71
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.970	0.980
WTOL	65 °C	65 °C
Poff	15 W	15 W
PTO	9 W	9 W
PSB	15 W	15 W
PCK	23 W	23 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	1.90 kW
Annual energy consumption Qhe	2005 kWh	5155 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level outdoor	60 dB(A)	60 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	154 %	116 %
Prated	6.00 kW	5.80 kW
SCOP	3.90	3.00
Tbiv	-17 °C	-17 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	3.70 kW	3.60 kW
COP Tj = -7°C	3.16	2.45
Cdh Tj = -7 °C		
Pdh Tj = +2°C	2.20 kW	2.10 kW
COP Tj = +2°C	5.08	3.80
Cdh Tj = +2 °C		
Pdh Tj = +7°C	2.60 kW	2.50 kW
COP Tj = +7°C	6.27	4.95
Cdh Tj = +7 °C		
Pdh Tj = 12°C	2.90 kW	2.90 kW
COP Tj = 12°C	7.59	6.44
Cdh Tj = +12 °C		
Pdh Tj = Tbiv	5.10 kW	4.70 kW
COP Tj = Tbiv	2.49	1.80

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	2.90 kW	4.80 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.91	1.56
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.970	0.980
WTOL	65 °C	65 °C
Poff	15 W	15 W
PTO	9 W	9 W
PSB	15 W	15 W
PCK	23 W	23 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.10 kW	1.05 kW
Annual energy consumption Qhe	3780 kWh	4791 kWh
Pdh Tj = -15°C (if TOL	5.06	4.73
COP Tj = -15°C (if TOL	2.49	1.80
Cdh Tj = -15 °C	0.988	0.992