

Subtype CTC EcoAir 410

Certificate Holder	CTC AB
Address	Box 309, Näsvägen
ZIP	SE-341 26
City	Ljungby
Country	SE
Certification Body	RISE CERT
Subtype title	CTC EcoAir 410
Registration number	012-058
Heat Pump Type	Outdoor Air/Water
Refrigerant	R407c
Mass of Refrigerant	2.7 kg
Certification Date	22.05.2023
Testing basis	EN 14511:2013, EN 14825:2013, EN12102:2013
Testing laboratory	RISE Research Institutes of Sweden

Model CTC EcoAir 410 1x230V

Model name	CTC EcoAir 410 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	11.43 kW	10.74 kW
El input	2.34 kW	3.41 kW
COP	4.89	3.15

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	58 dB(A)	58 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	154 %	127 %
Prated	9.60 kW	8.50 kW
SCOP	3.90	3.25
Tbiv	-5 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	7.40 kW	7.08 kW
COP Tj = -7°C	3.25	2.35
Cdh Tj = -7 °C	0.970	0.990
Pdh Tj = +2°C	9.00 kW	8.62 kW
COP Tj = +2°C	3.94	3.17
Cdh Tj = +2 °C	0.970	0.990
Pdh Tj = +7°C	11.70 kW	11.44 kW
COP Tj = +7°C	5.08	4.29
Cdh Tj = +7 °C	0.970	0.990

Pdh Tj = 12°C	14.00 kW	13.38 kW
COP Tj = 12°C	6.23	5.23
Cdh Tj = +12 °C	0.970	0.990
Pdh Tj = Tbiv	7.80 kW	7.08 kW
COP Tj = Tbiv	3.42	2.35
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.67 kW	6.39 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.97	2.04
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.970	0.990
WTOL	65 °C	65 °C
Poff	18 W	18 W
PTO	41 W	18 W
PSB	18 W	18 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.93 kW	2.11 kW
Annual energy consumption Qhe	5063 kWh	5403 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level outdoor	58 dB(A)	58 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	136 %	109 %
Prated	7.50 kW	7.27 kW
SCOP	3.50	2.80
Tbiv	-14 °C	-13 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.50 kW	6.90 kW
COP Tj = -7°C	3.41	2.56
Pdh Tj = +2°C	9.10 kW	8.70 kW
COP Tj = +2°C	4.06	3.28
Pdh Tj = +7°C	11.80 kW	11.30 kW
COP Tj = +7°C	5.21	4.25
Pdh Tj = 12°C	14.00 kW	13.40 kW
COP Tj = 12°C	6.20	5.21
Pdh Tj = Tbiv	5.70 kW	5.50 kW
COP Tj = Tbiv	2.74	2.13
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.10 kW	3.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.07	1.50

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.97	0.99
WTOL	65 °C	65 °C
Poff	18 W	18 W
PTO	41 W	13 W
PSB	18 W	18 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.40 kW	3.70 kW
Annual energy consumption Qhe	5337 kWh	6381 kWh

Model CTC EcoAir 410 3x400V

Model name	CTC EcoAir 410 3x400V
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	3x400V 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	11.43 kW	10.74 kW
El input	2.34 kW	3.41 kW
COP	4.89	3.15

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	58 dB(A)	58 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	154 %	127 %
Prated	9.60 kW	8.50 kW
SCOP	3.92	3.25
Tbiv	-5 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	7.37 kW	7.08 kW
COP Tj = -7°C	3.25	2.35
Cdh Tj = -7 °C	0.974	0.990
Pdh Tj = +2°C	9.01 kW	8.62 kW
COP Tj = +2°C	3.94	3.17
Cdh Tj = +2 °C	0.974	0.990
Pdh Tj = +7°C	11.73 kW	11.44 kW
COP Tj = +7°C	5.08	4.29
Cdh Tj = +7 °C	0.973	0.990

Pdh Tj = 12°C	13.98 kW	13.38 kW
COP Tj = 12°C	6.23	5.23
Cdh Tj = +12 °C	0.973	0.990
Pdh Tj = Tbiv	7.75 kW	7.08 kW
COP Tj = Tbiv	3.42	2.35
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.67 kW	6.39 kW
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COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.07	1.50

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.97	0.99
WTOL	65 °C	65 °C
Poff	18 W	18 W
PTO	41 W	13 W
PSB	18 W	18 W
PCK	0 W	0 W
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Annual energy consumption Qhe	5337 kWh	6381 kWh