

This information was generated by the HP KEYMARK database on 3 Mar 2021

Summary of	CTC EcoAir 410	Reg. No.	012-058
Certificate Holder			
Name	Enertech CTC AB		
Address	Box 309, Näsvägen	Zip	SE-381 26
City	Ljungby	Country	Sweden
Certification Body	RISE CERT		
Subtype title	CTC EcoAir 410		
Heat Pump Type	Outdoor Air/Water		
Refrigerant	R407c		
Mass Of Refrigerant	2.7 kg		
Certification Date	12.06.2017		

Model: CTC EcoAir 410 1x230V

General Data

Power supply	1x230V 50Hz
--------------	-------------

Heating

EN 14511-2

	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 14511-4

Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed

Average Climate

This information was generated by the HP KEYMARK database on 3 Mar 2021

EN 12102-1

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

EN 14825

	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		0.990
Pdh Tj = +2°C	9.00 kW	8.62 kW
COP Tj = +2°C	3.94	3.17
Cdh		0.990
Pdh Tj = +7°C	11.70 kW	11.44 kW
COP Tj = +7°C	5.08	4.29
Cdh		0.990
Pdh Tj = 12°C	14.00 kW	13.38 kW

This information was generated by the HP KEYMARK database on 3 Mar 2021

COP Tj = 12°C	6.23	5.23
Cdh		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	6.10 kW	6.39 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.97	2.04
Cdh	0.97	0.99
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	2.90 kW	2.11 kW
Annual energy consumption Qhe	5063 kWh	5403 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	58 dB(A)	58 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 3 Mar 2021

	Low temperature	Medium temperature
η_s	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	0.97	0.99
WTOL	65 °C	65 °C
Poff	18 W	18 W

This information was generated by the HP KEYMARK database on 3 Mar 2021

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 Q _{he}	5337 kWh	6381 kWh

Model: CTC EcoAir 410 3x400V

General Data

Power supply	3x400V 50Hz
--------------	-------------

Heating

EN 14511-2

	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 14511-4

Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed

Average Climate

EN 12102-1

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

EN 14825

	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		0.990
Pdh Tj = +2°C	9.00 kW	8.62 kW
COP Tj = +2°C	3.94	3.17
Cdh		0.990
Pdh Tj = +7°C	11.70 kW	11.44 kW
COP Tj = +7°C	5.08	4.29
Cdh		0.990
Pdh Tj = 12°C	14.00 kW	13.38 kW

This information was generated by the HP KEYMARK database on 3 Mar 2021

COP Tj = 12°C	6.23	5.23
Cdh		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	6.10 kW	6.39 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.97	2.04
Cdh	0.97	0.99
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	2.90 kW	2.11 kW
Annual energy consumption Qhe	5063 kWh	5403 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	58 dB(A)	58 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 3 Mar 2021

	Low temperature	Medium temperature
η_s	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	0.97	0.99
WTOL	65 °C	65 °C
Poff	18 W	18 W

This information was generated by the HP KEYMARK database on 3 Mar 2021

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 Q _{he}	5337 kWh	6381 kWh