Subtype CTC EcoPart 412

Certificate Holder	CTC AB
Address	Box 309, Näsvägen
ZIP	SE-341 26
City	Ljungby
Country	SE
Certification Body	RISE CERT
Subtype title	CTC EcoPart 412
Registration number	012-065
Heat Pump Type	Brine/Water
Refrigerant	R407c
Mass of Refrigerant	2.3 kg
Testing basis	EN 14511:2013, EN 14825:2013, EN12102:2013
Testing laboratory	RISE Research Institutes of Sweden

Model CTC EcoPart 412 1x230V	
Model name	CTC EcoPart 412 1x230V
Application	Heating (medium temp)
Units	Indoor
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

Brine/Water

EN 14511-4 | Heating

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

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	11.75 kW	10.97 kW
El input	2.56 kW	3.57 kW
COP	4.60	3.08

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	50 dB(A)	50 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
ηs	182 %	138 %
Prated	13.35 kW	12.49 kW
SCOP	4.80	3.65
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.80 kW	11.00 kW
COP Tj = -7°C	4.69	3.25
Pdh Tj = +2°C	11.90 kW	11.20 kW
COP Tj = +2°C	4.88	3.64
Pdh Tj = +7°C	12.00 kW	11.40 kW
COP Tj = +7°C	5.06	4.02
Pdh Tj = 12°C	12.10 kW	11.60 kW
COP Tj = 12°C	5.23	4.40
Pdh Tj = Tbiv	11.80 kW	11.20 kW
COP Tj = Tbiv	4.69	3.25

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.75 kW	10.97 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.60	3.08
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.98	0.99
WTOL	65 °C	65 °C
Poff	18 W	18 W
PTO	22 W	5 W
PSB	18 W	18 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.60 kW	1.50 kW
Annual energy consumption Qhe	5814 kWh	7084 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	50 dB(A)	50 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	185 %	141 %
Prated	12.44 kW	12.35 kW
SCOP	4.80	3.70
Tbiv	-20 °C	-18 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	11.90 kW	11.20 kW
COP Tj = -7°C	4.89	3.56
Pdh Tj = +2°C	12.00 kW	11.40 kW
COP Tj = +2°C	5.06	3.94
Pdh Tj = +7°C	12.10 kW	11.60 kW
COP Tj = +7°C	5.18	4.29
Pdh Tj = 12°C	12.10 kW	11.70 kW
COP Tj = 12°C	5.20	4.54
Pdh Tj = Tbiv	11.80 kW	11.20 kW
COP Tj = Tbiv	4.66	3.25
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.75 kW	10.97 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.60	3.08
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.98	0.99
WTOL	65 °C	65 °C
Poff	18 W	18 W
PTO	22 W	5 W
PSB	18 W	18 W

PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.70 kW	1.40 kW
Annual energy consumption Qhe	6373 kWh	8195 kWh

Model CTC EcoPart 412 3x400V

Model name	CTC EcoPart 412 3x400V
Application	Heating (medium temp)
Units	Indoor
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

Brine/Water

EN 14511-4 | Heating

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

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	11.75 kW	10.97 kW
El input	2.56 kW	3.57 kW
COP	4.60	3.08

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	50 dB(A)	50 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
ηs	182 %	138 %
Prated	13.35 kW	12.49 kW
SCOP	4.80	3.65
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.80 kW	11.00 kW
COP Tj = -7°C	4.69	3.25
Pdh Tj = +2°C	11.90 kW	11.20 kW
COP Tj = +2°C	4.88	3.64
Pdh Tj = +7°C	12.00 kW	11.40 kW
COP Tj = +7°C	5.06	4.02
Pdh Tj = 12°C	12.10 kW	11.60 kW
COP Tj = 12°C	5.23	4.40
Pdh Tj = Tbiv	11.80 kW	11.20 kW
COP Tj = Tbiv	4.69	3.25

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.75 kW	10.97 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.60	3.08
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.98	0.99
WTOL	65 °C	65 °C
Poff	18 W	18 W
PTO	22 W	5 W
PSB	18 W	18 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.60 kW	1.50 kW
Annual energy consumption Qhe	5814 kWh	7084 kWh

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COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.60	3.08
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.98	0.99
WTOL	65 °C	65 °C
Poff	18 W	18 W
PTO	22 W	5 W
PSB	18 W	18 W

PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.70 kW	1.40 kW
Annual energy consumption Qhe	6373 kWh	8195 kWh