Subtype CTA Aeroheat CM 18a

Certificate Holder	CTC AB
Address	Box 309, Näsvägen
ZIP	SE-341 26
City	Ljungby
Country	SE
Certification Body	RISE CERT
Subtype title	CTA Aeroheat CM 18a
Registration number	012-SC0321-18
Heat Pump Type	Outdoor Air/Water
Refrigerant	R407c
Mass of Refrigerant	2.7 kg
Certification Date	17.05.2023
Testing basis	EN 14511:2013, EN 14825:2016, EN12102:2013
Testing laboratory	Danish Technological Institute (DTI), DK

Model CTA Aeroheat CM 18a

Model name	CTA Aeroheat CM 18a
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	11.38 kW	9.35 kW
El input	2.25 kW	2.84 kW
COP	5.06	3.29

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	56 dB(A)	56 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
ηs	193 %	147 %
Prated	8.50 kW	8.50 kW
SCOP	4.92	3.77
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	7.76 kW	7.52 kW
COP Tj = -7°C	3.53	2.41
Pdh Tj = +2°C	4.49 kW	4.61 kW
COP Tj = +2°C	4.97	3.81
Pdh Tj = +7°C	4.81 kW	4.72 kW
COP Tj = +7°C	5.94	4.76
Pdh Tj = 12°C	5.56 kW	5.55 kW
COP Tj = 12°C	7.35	6.15
Pdh Tj = Tbiv	8.75 kW	8.66 kW

COP Tj = Tbiv	3.04	1.99
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.75 kW	8.66 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.04	1.99
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.98	0.99
WTOL	65 °C	65 °C
Poff	12 W	12 W
PTO	12 W	12 W
PSB	12 W	12 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	3567 kWh	4656 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level outdoor	56 dB(A)	56 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	167 %	136 %
Prated	12.50 kW	11.50 kW
SCOP	4.26	3.47
Tbiv	-17 °C	-18 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.60 kW	7.29 kW
COP Tj = -7°C	3.67	2.91
Cdh Tj = -7 °C		
Pdh Tj = +2°C	4.70 kW	4.63 kW
COP Tj = +2°C	5.49	4.53
Cdh Tj = +2 °C		
Pdh Tj = +7°C	4.87 kW	4.76 kW
COP Tj = +7°C	6.70	5.28
Cdh Tj = +7 °C		
Pdh Tj = 12°C	5.58 kW	5.55 kW
COP Tj = 12°C	7.77	6.44
Cdh Tj = +12 °C		
Pdh Tj = Tbiv	11.35 kW	10.87 kW
COP Tj = Tbiv	1.99	1.46
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.92 kW	4.57 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.99	1.51

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.980	0.990
WTOL	65 °C	65 °C
Poff	12 W	12 W
PTO	12 W	12 W
PSB	12 W	12 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	7.58 kW	6.93 kW
Annual energy consumption Qhe	7225 kWh	8159 kWh
Pdh Tj = -15°C (if TOL	10.31	9.55
COP Tj = -15°C (if TOL	2.36	1.81
Cdh Tj = -15 °C	1.000	1.000