

Subtype CTC CombiAir 12M

Certificate Holder	CTC AB
Address	Box 309, Näsvägen
ZIP	SE-341 26
City	Ljungby
Country	SE
Certification Body	RISE CERT
Subtype title	CTC CombiAir 12M
Registration number	012-C700077
Heat Pump Type	Outdoor Air/Water
Refrigerant	R410A
Mass of Refrigerant	2.9 kg
Certification Date	30.10.2020
Testing basis	EN 14511:2013, EN 14825:2013, EN12102:2013
Testing laboratory	Austrian Institute of Technology (AIT)

Model CTC CombiAir 12M

Model name	CTC CombiAir 12M
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	n/a
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	5.21 kW	4.73 kW
El input	1.09 kW	1.54 kW
COP	4.78	3.07

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	57 dB(A)	57 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	174 %	132 %
Prated	11.50 kW	10.00 kW
SCOP	4.42	3.37
Tbiv	-7 °C	-8 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.30 kW	8.90 kW
COP Tj = -7°C	2.91	1.99
Pdh Tj = +2°C	6.30 kW	5.50 kW
COP Tj = +2°C	4.34	3.22
Pdh Tj = +7°C	4.10 kW	3.50 kW
COP Tj = +7°C	5.51	4.61
Pdh Tj = 12°C	4.80 kW	5.00 kW
COP Tj = 12°C	6.96	6.25
Pdh Tj = Tbiv	10.20 kW	9.20 kW

COP $T_j = T_{biv}$	2.89	1.90
$P_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	9.30 kW	8.10 kW
COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	2.66	1.92
$C_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	0.97	0.98
WTOL	58 °C	58 °C
P _{off}	2 W	2 W
PTO	20 W	15 W
PSB	15 W	15 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.20 kW	1.90 kW
Annual energy consumption Q _{he}	5482 kWh	6136 kWh