

Subtype LWC 100

Certificate Holder	ait-deutschland GmbH
Address	Industriestr. 3
ZIP	95359
City	Kasendorf
Country	DE
Certification Body	BRE Global Limited
Subtype title	LWC 100
Registration number	041-K001-29
Heat Pump Type	Outdoor Air/Water
Refrigerant	R404A
Mass of Refrigerant	4.1 kg
Certification Date	06.09.2019

Model LWC 100

Model name	LWC 100
Application	Heating (medium temp)
Units	Indoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	n/a

Outdoor Air/Water EN 14511-4 | Heating

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	12.20 kW	11.20 kW
El input	2.98 kW	5.01 kW
COP	4.10	2.20

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	55 dB(A)	55 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	146 %	116 %
Prated	11.89 kW	11.19 kW
SCOP	3.73	2.97
Tbiv	-4 °C	-4 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.43 kW	7.83 kW
COP Tj = -7°C	2.86	2.01
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	10.51 kW	10.17 kW
COP Tj = +2°C	3.77	2.93
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	12.41 kW	12.15 kW
COP Tj = +7°C	4.63	3.93
Cdh Tj = +7 °C	1.00	1.00

Pdh Tj = 12°C	14.06 kW	14.00 kW
COP Tj = 12°C	5.03	4.88
Cdh Tj = +12 °C	1.00	1.00
Pdh Tj = Tbiv	9.14 kW	8.61 kW
COP Tj = Tbiv	3.19	2.27
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.69 kW	7.17 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.59	1.79
WTOL	58 °C	58 °C
Poff	10 W	10 W
PTO	10 W	10 W
PSB	10 W	10 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.20 kW	4.02 kW
Annual energy consumption Qhe	6587 kWh	7791 kWh

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	131 %	107 %
Prated	9.21 kW	8.82 kW
SCOP	3.34	2.74
Tbiv	-13 °C	-13 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	8.53 kW	8.10 kW
COP Tj = -7°C	3.04	2.32
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	10.57 kW	10.33 kW
COP Tj = +2°C	3.94	3.28
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	12.47 kW	12.34 kW
COP Tj = +7°C	4.75	4.36
Cdh Tj = +7 °C	1.00	1.00
Pdh Tj = 12°C	14.04 kW	14.12 kW
COP Tj = 12°C	4.86	5.04
Cdh Tj = +12 °C	1.00	1.00
Pdh Tj = Tbiv	7.03 kW	6.73 kW
COP Tj = Tbiv	2.54	1.87
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.31 kW	5.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.89	1.42
WTOL	58 °C	58 °C
Poff	10 W	10 W
PTO	10 W	10 W

PSB	10 W	10 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	9.21 kW	8.82 kW
Annual energy consumption Q _{he}	6791 kWh	7942 kWh
P _{dh} T _j = -15 °C (if TOL	6.53	6.30
COP T _j = -15 °C (if TOL	2.35	1.73
C _{dh} T _j = -15 °C	1.00	1.00

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η _s	175 %	137 %
Prated	13.05 kW	12.23 kW
SCOP	4.45	3.51
T _{biv}	4 °C	4 °C
TOL	2 °C	2 °C
P _{dh} T _j = +2 °C	10.40 kW	9.73 kW
COP T _j = +2 °C	3.47	2.25
C _{dh} T _j = +2 °C	1.00	1.00
P _{dh} T _j = +7 °C	12.31 kW	11.69 kW
COP T _j = +7 °C	4.35	3.07
C _{dh} T _j = +7 °C	1.00	1.00
P _{dh} T _j = 12 °C	13.99 kW	13.76 kW
COP T _j = 12 °C	4.92	4.43
C _{dh} T _j = +12 °C	1.00	1.00
P _{dh} T _j = T _{biv}	11.18 kW	10.49 kW
COP T _j = T _{biv}	3.87	2.53
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	10.40 kW	9.73 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	3.47	2.25
WTOL	58 °C	58 °C
P _{off}	10 W	10 W
PTO	10 W	10 W
PSB	10 W	10 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.65 kW	2.50 kW
Annual energy consumption Q _{he}	3920 kWh	4652 kWh