

Subtype LWC 80

Certificate Holder	ait-deutschland GmbH
Address	Industriestr. 3
ZIP	95359
City	Kasendorf
Country	DE
Certification Body	BRE Global Limited
Subtype title	LWC 80
Registration number	041-K001-28
Heat Pump Type	Outdoor Air/Water
Refrigerant	R407c
Mass of Refrigerant	3.2 kg
Certification Date	06.09.2019

Model LWC 80

Model name	LWC 80
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 12102-1 | Average Climate

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

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	151 %	122 %
Prated	8.34 kW	7.85 kW
SCOP	3.84	3.15
Tbiv	-5 °C	-5 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	6.32 kW	5.94 kW
COP Tj = -7°C	2.98	2.07
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	8.16 kW	7.85 kW
COP Tj = +2°C	3.81	3.07
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	8.61 kW	8.54 kW
COP Tj = +7°C	4.82	4.17
Cdh Tj = +7 °C	0.99	1.00
Pdh Tj = 12°C	9.95 kW	9.93 kW
COP Tj = 12°C	5.08	4.94
Cdh Tj = +12 °C	1.00	1.00
Pdh Tj = Tbiv	6.74 kW	6.34 kW
COP Tj = Tbiv	3.21	2.27

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.72 kW	5.38 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.68	1.84
WTOL	60 °C	60 °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	2.62 kW	2.47 kW
Annual energy consumption Qhe	4489 kWh	5195 kWh

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	133 %	110 %
Prated	5.84 kW	5.65 kW
SCOP	3.40	2.82
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	6.37 kW	6.11 kW
COP Tj = -7°C	3.14	2.40
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	8.21 kW	8.01 kW
COP Tj = +2°C	3.92	3.39
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	8.63 kW	8.59 kW
COP Tj = +7°C	4.88	4.53
Cdh Tj = +7 °C	0.99	1.00
Pdh Tj = 12°C	9.94 kW	9.96 kW
COP Tj = 12°C	4.82	4.99
Cdh Tj = +12 °C	1.00	1.00
Pdh Tj = Tbiv	4.76 kW	4.61 kW
COP Tj = Tbiv	2.37	1.76
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.77 kW	3.92 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.86	1.48
WTOL	60 °C	60 °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	5.84 kW	5.65 kW

Annual energy consumption Q _{he}	4239 kWh	4931 kWh
P _{dh} T _j = -15 °C (if TOL	4.76	4.61
COP T _j = -15 °C (if TOL	2.37	1.76
C _{dh} T _j = -15 °C	1.00	1.00

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η _s	181 %	146 %
Prated	9.68 kW	9.17 kW
SCOP	4.59	3.72
T _{biv}	4 °C	4 °C
TOL	2 °C	2 °C
P _{dh} T _j = +2 °C	8.07 kW	7.43 kW
COP T _j = +2 °C	3.59	2.43
C _{dh} T _j = +2 °C	1.00	1.00
P _{dh} T _j = +7 °C	8.58 kW	8.40 kW
COP T _j = +7 °C	4.61	3.37
C _{dh} T _j = +7 °C	1.00	1.00
P _{dh} T _j = 12 °C	9.93 kW	9.88 kW
COP T _j = 12 °C	5.04	4.57
C _{dh} T _j = +12 °C	1.00	1.00
P _{dh} T _j = T _{biv}	8.30 kW	7.86 kW
COP T _j = T _{biv}	4.00	2.76
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	8.07 kW	7.43 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	3.59	1.00
WTOL	60 °C	60 °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	1.61 kW	1.74 kW
Annual energy consumption Q _{he}	2817 kWh	3297 kWh