This information was generated by the HP KEYMARK database on 17 Dec 2020

Summary of	LW 140	Reg. No.	041-K001-38
Certificate Holder			
Name	ait-deutschland GmbH		
Address	Industriestr. 3	Zip	95359
City	Kasendorf	Country	Germany
Certification Body	BRE Energy & Communications Division		
Name of testing laboratory	HLK Stuttgart		
Subtype title	LW 140		
Heat Pump Type	Outdoor Air/Water		
Refrigerant	R407c		
Mass Of Refrigerant	10.2 kg		
Certification Date	08.10.2019		

Model: LW 140 (L)

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Starting and operating test	passed

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	14.38 kW	13.74 kW
El input	3.26 kW	4.70 kW
COP	4.30	2.83
Indoor water flow rate	2.80 m³/h	2.80 m³/h

Average Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	58 dB(A)	58 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	157 %	125 %
Prated	14.43 kW	13.71 kW
SCOP	4.00	3.20
Tbiv	-5 °C	-5 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.00 kW	10.40 kW
COP Tj = -7°C	3.13	2.16
Cdh	1.00	1.00
Pdh Tj = +2°C	13.90 kW	13.49 kW
COP Tj = +2°C	3.94	3.10
Cdh	1.00	1.00
Pdh Tj = +7°C	14.53 kW	14.35 kW
COP Tj = +7°C	4.94	4.28
Cdh	1.00	1.00
Pdh Tj = 12°C	16.37 kW	16.34 kW
COP Tj = 12°C	5.43	5.27
Cdh	1.00	1.00
Pdh Tj = Tbiv	11.66 kW	11.07 kW
COP Tj = Tbiv	3.34	2.34

Pdh Tj = TOL	10.15 kW	9.58 kW
COP Tj = TOL	2.87	1.96
WTOL	50 °C	50 °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	4.28 kW	4.13 kW
Annual energy consumption Qhe	7447 kWh	8842 kWh

Warmer Climate

EN 14825		
	Low temperature	**Medium temperature**
η_s	190 %	152 %
Prated	16.43 kW	15.64 kW
SCOP	4.82	3.88
Tbiv	4 °C	4 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	13.79 kW	12.95 kW
COP Tj = +2°C	3.66	2.38

Cdh	1.00	1.00
Pdh Tj = +7°C	14.46 kW	14.03 kW
COP Tj = +7°C	4.71	3.46
Cdh	1.00	1.00
Pdh Tj = 12°C	16.32 kW	16.17 kW
COP Tj = 12°C	5.33	4.80
Cdh	1.00	1.00
Pdh Tj = Tbiv	14.08 kW	13.40 kW
COP Tj = Tbiv	4.10	2.76
Pdh Tj = TOL	13.79 kW	12.95 kW
COP Tj = TOL	3.66	2.38
WTOL	50 °C	50 °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	2.64 kW	2.69 kW
Annual energy consumption Qhe	4553 kWh	5391 kWh

Colder Climate

EN 14825

	Low temperature	Medium temperature
η_s	140 %	115 %
Prated	13.15 kW	12.60 kW
SCOP	3.58	2.95
Tbiv	-12 °C	-12 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	11.09 kW	10.66 kW
COP Tj = -7°C	3.35	2.51
Cdh	1.00	1.00
Pdh Tj = +2°C	13.99 kW	13.70 kW
COP Tj = +2°C	4.14	3.47
Cdh	1.00	1.00
Pdh Tj = +7°C	14.57 kW	14.47 kW
COP Tj = +7°C	5.09	4.70
Cdh	1.00	1.00
Pdh Tj = 12°C	16.36 kW	16.40 kW
COP Tj = 12°C	5.31	5.49
Cdh	1.00	1.00
Pdh Tj = Tbiv	9.69 kW	9.29 kW
COP Tj = Tbiv	2.95	2.15

Pdh Tj = TOL	7.43 kW	7.71 kW
COP Tj = TOL	2.24	1.78
WTOL	50 °C	50 °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	13.15 kW	12.60 kW
Annual energy consumption Qhe	9044 kWh	10533 kWh
Pdh Tj = -15°C (if TOL<-20°C)	8.83	8.49
COP Tj = -15°C (if TOL<-20°C)	2.68	1.96
Cdh	1.00	1.00

Model: LW 140A

General Data	
Power supply	3x400V 50Hz

Heating

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Complete power supply failure	passed
Starting and operating test	passed

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