This information was generated by the HP KEYMARK database on 5 Mar 2021

Summary of	LWD 50A/SX	Reg. No.	041-K001-43
Certificate Holder			
Name	ait-deutschland GmbH		
Address	Industriestr. 3	Zip	95359
City	Kasendorf	Country	Germany
Certification Body	BRE Global Limited		
Subtype title	LWD 50A/SX		
Heat Pump Type	Outdoor Air/Water		
Refrigerant	R290		
Mass Of Refrigerant	0.95 kg		
Certification Date	24.11.2020		
Testing basis	HP Keymark Scheme Rules Rev 08		

Model: LWD 50A/SX-HMD

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	6.85 kW	6.04 kW
El input	1.53 kW	2.01 kW
COP	4.46	3.00

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

Average Climate

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

EN 14825

	Low temperature	Medium temperature
η_s	152 %	127 %
Prated	6.37 kW	5.91 kW
SCOP	3.88	3.25
Tbiv	-4 °C	-4 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.57 kW	4.11 kW
COP Tj = -7°C	3.04	2.28
Cdh	1.00	1.00
Pdh Tj = +2°C	5.52 kW	5.36 kW
COP Tj = +2°C	3.94	3.23
Cdh	0.99	0.99
Pdh Tj = +7°C	7.03 kW	6.81 kW
COP Tj = +7°C	4.87	4.32
Cdh	0.99	0.99
Pdh Tj = 12°C	7.54 kW	7.51 kW
COP Tj = 12°C	5.54	5.36
Cdh	0.99	0.99
Pdh Tj = Tbiv	4.90 kW	4.55 kW
COP Tj = Tbiv	3.35	2.57

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.18 kW	3.72 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.81	2.05
WTOL	62 °C	1 °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	2.19 kW	2.19 kW
Annual energy consumption Qhe	3388 kWh	3762 kWh

Warmer Climate

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

EN 14825		
	Low temperature	**Medium temperature**
η_s	189 %	155 %
Prated	7.07 kW	6.54 kW
SCOP	4.79	3.95

Tbiv	4 °C	4 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.47 kW	5.16 kW
COP Tj = +2°C	3.70	2.62
Cdh	1.00	1.00
Pdh Tj = +7°C	6.94 kW	6.40 kW
COP Tj = +7°C	4.69	3.56
Cdh	0.99	0.99
Pdh Tj = 12°C	7.51 kW	7.41 kW
COP Tj = 12°C	5.53	5.01
Cdh	0.99	0.99
Pdh Tj = Tbiv	6.06 kW	5.60 kW
COP Tj = Tbiv	4.15	2.95
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.47 kW	5.16 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.70	2.62
WTOL	62 °C	62 °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	1.60 kW	1.38 kW
Annual energy consumption Qhe	1971 kWh	2211 kWh

Colder Climate

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

EN 14825		
	Low temperature	**Medium temperature**
η_s	135 %	114 %
Prated	5.43 kW	4.98 kW
SCOP	3.44	2.93
Tbiv	-12 °C	-12 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	4.64 kW	4.31 kW
COP Tj = -7°C	3.19	2.58
Cdh	0.99	0.99
Pdh Tj = +2°C	5.55 kW	5.44 kW
COP Tj = +2°C	4.07	3.51
Cdh	0.99	0.99

Pdh Tj = +7°C	7.08 kW	6.97 kW
COP Tj = +7°C	4.93	4.63
Cdh	0.99	0.99
Pdh Tj = 12°C	7.54 kW	7.56 kW
COP Tj = 12°C	5.29	5.39
Cdh	0.99	0.99
Pdh Tj = Tbiv	4.00 kW	3.67 kW
COP Tj = Tbiv	2.84	2.19
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	2.94 kW	2.72 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.18	1.61
WTOL	62 °C	62 °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	5.43 kW	4.98 kW
Annual energy consumption Qhe	3888 kWh	4185 kWh
Pdh Tj = -15°C (if TOL<-20°C)	3.61	3.30
COP Tj = -15°C (if TOL<-20°C)	2.60	1.97
Cdh	1.00	1.00

Model: LWD 50A/SX-HTD S

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