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Login

Summary of	LWD 70A/SX	Reg. No.	041-K001-44
Certificate Holder			
Name	ait-deutschland GmbH		
Address	Industriestr. 3	Zip	95359
City	Kasendorf	Country	Germany
Certification Body	BRE Global Limited		
Subtype title	LWD 70A/SX		
Heat Pump Type	Outdoor Air/Water		
Refrigerant	R290		
Mass of Refrigerant	1.1 kg		
Certification Date	24.11.2020		
Testing basis	HP Keymark Scheme Rules Rev 08		

Model: LWD 70A/SX-HMD

Configure model	
Model name	LWD 70A/SX-HMD
Application	Heating (medium temp)
Units	Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	9.33 kW	8.49 kW
El input	2.20 kW	2.85 kW
COP	4.24	2.97

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	144 %	121 %
Prated	8.84 kW	8.13 kW
SCOP	3.67	3.09
Tbiv	-10 °C	-10 °C
TOL	-4 °C	-4 °C
Pdh Tj = -7°C	6.18 kW	5.81 kW
COP Tj = -7°C	2.74	2.15
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	7.55 kW	7.22 kW
COP Tj = +2°C	3.76	3.05
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	9.52 kW	9.29 kW
COP Tj = +7°C	4.59	4.12
Cdh Tj = +7 °C	1.00	1.00
Pdh Tj = 12°C	10.97 kW	10.91 kW

COP Tj = 12°C	4.92	4.84
Cdh Tj = +12 °C	1.00	1.00
Pdh Tj = Tbiv	6.64 kW	6.25 kW
COP Tj = Tbiv	3.07	2.40
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.78 kW	5.38 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.54	1.97
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	2.86 kW	2.75 kW
Annual energy consumption Qhe	4867 kWh	5440 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	175 %	148 %
Prated	9.63 kW	8.87 kW
SCOP	4.44	3.76
Tbiv	4 °C	4 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.44 kW	6.80 kW
COP Tj = +2°C	3.51	2.42
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	9.43 kW	8.87 kW
COP Tj = +7°C	4.42	3.46
Cdh Tj = +7 °C	1.00	1.00
Pdh Tj = 12°C	10.89 kW	10.64 kW
COP Tj = 12°C	4.91	4.59
Cdh Tj = +12 °C	1.00	1.00
Pdh Tj = Tbiv	8.25 kW	7.61 kW
COP Tj = Tbiv	3.93	2.81
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.44 kW	6.80 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.51	2.42
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	2.19 kW	2.07 kW
Annual energy consumption Qhe	2896 kWh	3152 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	128 %	110 %
Prated	5.99 kW	5.61 kW
SCOP	3.28	2.83
Tbiv	-20 °C	-20 °C
TOL	-16 °C	-16 °C
Pdh Tj = -7°C	6.24 kW	5.97 kW
COP Tj = -7°C	2.84	2.38

Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	7.60 kW	7.37 kW
COP Tj = +2°C	3.86	3.33
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	9.57 kW	9.46 kW
COP Tj = +7°C	4.61	4.37
Cdh Tj = +7 °C	1.00	1.00
Pdh Tj = 12°C	10.95 kW	11.05 kW
COP Tj = 12°C	4.70	4.80
Cdh Tj = +12 °C	1.00	1.00
Pdh Tj = Tbiv	5.18 kW	4.73 kW
COP Tj = Tbiv	2.33	1.85
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.05 kW	4.18 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.27	1.64
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	5.99 kW	5.61 kW

Annual energy consumption Qhe	4508 kWh	4893 kWh
Pdh Tj = -15°C (if TOL<-20°C)	5.18	4.86
COP Tj = -15°C (if TOL<-20°C)	2.33	1.91
Cdh Tj = -15 °C	1.00	1.00

Model: LWD 70A/SX-HTD S

Configure model	
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Units	Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	No
Cooling mode application (optional)	n/a

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Power supply	1x230V 50Hz

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PTO	10 W	10 W
PSB	10 W	10 W
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Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.19 kW	2.07 kW
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