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Login

Summary of	LWD 70A	Reg. No.	041-K001-21
Certificate Holder			
Name	ait-deutschland GmbH		
Address	Industriestr. 3	Zip	95359
City	Kasendorf	Country	Germany
Certification Body	BRE Global Limited		
Subtype title	LWD 70A		
Heat Pump Type	Outdoor Air/Water		
Refrigerant	R290		
Mass of Refrigerant	1.1 kg		
Certification Date	12.05.2017		
Testing basis	HP Keymark Scheme Transition Rules		

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Model: LWD 70A-HMD

Configure model	
Model name	LWD 70A-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	3x400V 50Hz

Heating

EN 14511-4	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	8.50 kW	8.10 kW
El input	1.96 kW	2.76 kW
COP	4.30	2.97

Average Climate

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EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level outdoor	57 dB(A)	57 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	158 %	127 %
Prated	8.85 kW	8.28 kW
SCOP	4.02	3.24
Tbiv	-4 °C	-4 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	6.30 kW	5.80 kW
COP Tj = -7°C	3.28	2.21
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	7.80 kW	7.50 kW
COP Tj = +2°C	4.09	3.25
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	8.50 kW	8.50 kW
COP Tj = +7°C	4.81	4.20
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	11.50 kW	11.50 kW

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COP Tj = 12°C	6.21	6.21
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	6.80 kW	6.40 kW
COP Tj = Tbiv	2.95	2.52
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.70 kW	5.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.95	1.92
WTOL	70 °C	70 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.15 kW	3.24 kW
Annual energy consumption Qhe	4549 kWh	5278 kWh

Warmer Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level outdoor	57 dB(A)	57 dB(A)

EN 14825		
	Low temperature	**Medium temperature**

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η_s	193 %	159 %
Prated	9.40 kW	8.89 kW
SCOP	4.91	4.04
Tbiv	4 °C	4 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.70 kW	7.00 kW
COP Tj = +2°C	3.79	2.52
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	8.50 kW	8.40 kW
COP Tj = +7°C	4.56	3.43
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	11.40 kW	11.20 kW
COP Tj = 12°C	6.00	2.52
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	8.10 kW	7.60 kW
COP Tj = Tbiv	4.14	2.87
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.70 kW	7.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.79	2.52
WTOL	70 °C	70 °C
Poff	15 W	15 W

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PTO	15 W	15 W
PSB	15 W	15 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.70 kW	1.89 kW
Annual energy consumption Qhe	2558 kWh	2938 kWh

Colder Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level outdoor	57 dB(A)	57 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	144 %	116 %
Prated	5.96 kW	5.40 kW
SCOP	3.67	2.99
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	6.40 kW	6.10 kW
COP Tj = -7°C	3.48	2.60

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Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	7.90 kW	7.60 kW
COP Tj = +2°C	4.24	3.62
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	8.50 kW	8.50 kW
COP Tj = +7°C	4.94	4.61
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	11.50 kW	11.70 kW
COP Tj = 12°C	6.14	6.59
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	4.90 kW	4.40 kW
COP Tj = Tbiv	2.68	1.81
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.90 kW	3.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.12	1.36
WTOL	70 °C	70 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.96 kW	5.40 kW

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Annual energy consumption Qhe	4000 kWh	4484 kWh
Pdh Tj = -15°C (if TOL<-20°C)	4.90	4.40
COP Tj = -15°C (if TOL<-20°C)	2.68	1.81
Cdh Tj = -15 °C	1.00	1.00

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Model: LWD 70A-HTD

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

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-4	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	8.50 kW	8.10 kW
El input	1.96 kW	2.76 kW
COP	4.30	2.97

Average Climate

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EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level outdoor	57 dB(A)	57 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	158 %	127 %
Prated	8.85 kW	8.28 kW
SCOP	4.02	3.24
Tbiv	-4 °C	-4 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	6.30 kW	5.80 kW
COP Tj = -7°C	3.28	2.21
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	7.80 kW	7.50 kW
COP Tj = +2°C	4.09	3.25
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	8.50 kW	8.50 kW
COP Tj = +7°C	4.81	4.20
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	11.50 kW	11.50 kW

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COP Tj = 12°C	6.21	6.21
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	6.80 kW	6.40 kW
COP Tj = Tbiv	2.95	2.52
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.70 kW	5.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.95	1.92
WTOL	70 °C	70 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.15 kW	3.24 kW
Annual energy consumption Qhe	4549 kWh	5278 kWh

Warmer Climate

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	Low temperature	**Medium temperature**
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EN 14825		
	Low temperature	**Medium temperature**

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η_s	193 %	159 %
Prated	9.40 kW	8.89 kW
SCOP	4.91	4.04
Tbiv	4 °C	4 °C
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Pdh Tj = +2°C	7.70 kW	7.00 kW
COP Tj = +2°C	3.79	2.52
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	8.50 kW	8.40 kW
COP Tj = +7°C	4.56	3.43
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	11.40 kW	11.20 kW
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COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.79	2.52
WTOL	70 °C	70 °C
Poff	15 W	15 W

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PTO	15 W	15 W
PSB	15 W	15 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.70 kW	1.89 kW
Annual energy consumption Qhe	2558 kWh	2938 kWh

Colder Climate

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WTOL	70 °C	70 °C
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PTO	15 W	15 W
PSB	15 W	15 W
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Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.96 kW	5.40 kW

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COP Tj = -15°C (if TOL<-20°C)	2.68	1.81
Cdh Tj = -15 °C	1.00	1.00

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