Login

Summary of	LW 300	Reg. No.	041-K001-42
Certificate Holder			
Name	ait-deutschland GmbH		
Address	Industriestr. 3	Zip	95359
City	Kasendorf	Country	Germany
Certification Body	BRE Global Limited		
Subtype title	LW 300		
Heat Pump Type	Outdoor Air/Water		
Refrigerant	R448A		
Mass of Refrigerant	10 kg		
Certification Date	20.07.2020		
Testing basis	Scheme Rules Rev 07		

Model: LW 300A-LUX 2.0

Configure model	
Model name	LW 300A-LUX 2.0
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 14511-2		
	Low temperature	**Medium temperature**
Heat output	19.78 kW	19.05 kW
El input	4.90 kW	6.85 kW
COP	4.04	2.78

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	68 dB(A)	68 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	138 %	114 %
Prated	21.95 kW	23.02 kW
SCOP	3.53	2.91
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	19.41 kW	20.36 kW
COP Tj = -7°C	2.65	1.99
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	16.37 kW	16.38 kW
COP Tj = +2°C	3.59	2.94
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	17.99 kW	18.36 kW
COP Tj = +7°C	4.05	3.51
Cdh Tj = +7 °C	0.98	0.99
Pdh Tj = 12°C	23.01 kW	23.48 kW

COP Tj = 12°C	5.28	4.72
Cdh Tj = +12 °C	0.98	0.99
Pdh Tj = Tbiv	21.95 kW	23.02 kW
COP Tj = Tbiv	2.45	1.78
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	21.95 kW	23.02 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.45	1.78
WTOL	60 °C	60 °C
Poff	38 W	38 W
PTO	24 W	15 W
PSB	38 W	38 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	12861 kWh	16314 kWh

Warmer Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level outdoor	68 dB(A)	68 dB(A)

EN 14825		
	Low temperature	**Medium temperature**

η_s	166 %	133 %
Prated	16.37 kW	16.06 kW
SCOP	4.22	3.40
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	16.37 kW	16.06 kW
COP Tj = +2°C	3.50	2.35
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	18.83 kW	19.35 kW
COP Tj = +7°C	3.98	3.11
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	23.57 kW	23.17 kW
COP Tj = 12°C	5.28	4.38
Cdh Tj = +12 °C	0.98	0.99
Pdh Tj = Tbiv	16.37 kW	16.06 kW
COP Tj = Tbiv	3.50	2.35
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.37 kW	16.06 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.50	2.35
WTOL	60 °C	60 °C
Poff	38 W	38 W

PTO	24 W	15 W
PSB	38 W	38 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	5177 kWh	6306 kWh

Colder Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level outdoor	68 dB(A)	68 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	125 %	100 %
Prated	23.69 kW	24.72 kW
SCOP	3.21	2.57
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	14.34 kW	14.96 kW
COP Tj = -7°C	2.83	2.28

Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	16.68 kW	16.45 kW
COP Tj = +2°C	3.81	3.18
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	18.04 kW	18.01 kW
COP Tj = +7°C	4.22	3.67
Cdh Tj = +7 °C	0.98	0.99
Pdh Tj = 12°C	23.68 kW	23.53 kW
COP Tj = 12°C	5.41	4.86
Cdh Tj = +12 °C	0.98	0.99
Pdh Tj = Tbiv	19.33 kW	20.16 kW
COP Tj = Tbiv	2.27	1.74
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.77 kW	20.16 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.90	1.74
WTOL	60 °C	60 °C
Poff	38 W	38 W
PTO	24 W	15 W
PSB	38 W	38 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	24.00 kW	25.00 kW

Annual energy consumption Qhe	18202 kWh	23747 kWh
Pdh Tj = -15°C (if TOL<-20°C)		
COP Tj = -15°C (if TOL<-20°C)		
Cdh Tj = -15 °C		

Model: LW 300(L)

Configure model	
Model name	LW 300(L)
Application	Heating (medium temp)
Units	Indoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	19.78 kW	19.05 kW
El input	4.90 kW	6.85 kW
COP	4.04	2.78

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 indoor	68 dB(A)	68 dB(A)
Sound power level outdoor	68 dB(A)	68 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	138 %	114 %
Prated	21.95 kW	23.02 kW
SCOP	3.53	2.91
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	19.41 kW	20.36 kW
COP Tj = -7°C	2.65	1.99
Cdh Tj = -7 °C	1.00	1.00
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Pdh Tj = +7°C	17.99 kW	18.36 kW
COP Tj = +7°C	4.05	3.51
Cdh Tj = +7 °C	0.98	0.99

Pdh Tj = 12°C	23.01 kW	23.48 kW
COP Tj = 12°C	5.28	4.72
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Pdh Tj = Tbiv	21.95 kW	23.02 kW
COP Tj = Tbiv	2.45	1.78
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	21.95 kW	23.02 kW
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WTOL	60 °C	60 °C
Poff	38 W	38 W
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PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	12861 kWh	16314 kWh

Warmer Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	68 dB(A)	68 dB(A)
Sound power level outdoor	68 dB(A)	68 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	166 %	133 %
Prated	16.37 kW	16.06 kW
SCOP	4.22	3.40
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	16.37 kW	16.06 kW
COP Tj = +2°C	3.50	2.35
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	18.83 kW	19.35 kW
COP Tj = +7°C	3.98	3.11
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	23.57 kW	23.17 kW
COP Tj = 12°C	5.28	4.38
Cdh Tj = +12 °C	0.98	0.99
Pdh Tj = Tbiv	16.37 kW	16.06 kW
COP Tj = Tbiv	3.50	2.35
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.37 kW	16.06 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.50	2.35
WTOL	60 °C	60 °C

Poff	38 W	38 W
PTO	24 W	15 W
PSB	38 W	38 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	5177 kWh	6306 kWh

Colder Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	68 dB(A)	68 dB(A)
Sound power level outdoor	68 dB(A)	68 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	125 %	100 %
Prated	23.69 kW	24.72 kW
SCOP	3.21	2.57
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-15 °C

Pdh Tj = -7°C	14.34 kW	14.96 kW
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Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	18.04 kW	18.01 kW
COP Tj = +7°C	4.22	3.67
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Pdh Tj = Tbiv	19.33 kW	20.16 kW
COP Tj = Tbiv	2.27	1.74
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.77 kW	20.16 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.90	1.74
WTOL	60 °C	60 °C
Poff	38 W	38 W
PTO	24 W	15 W
PSB	38 W	38 W
PCK	0 W	0 W

Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	24.00 kW	25.00 kW
Annual energy consumption Qhe	18202 kWh	23747 kWh
Pdh Tj = -15°C (if TOL<-20°C)		
COP Tj = -15°C (if TOL<-20°C)		
Cdh Tj = -15 °C		