Subtype LW 300

Certificate Holder	ait-deutschland GmbH
Address	Industriestr. 3
ZIP	95359
City	Kasendorf
Country	DE
Certification Body	BRE Global Limited
Subtype title	LW 300
Registration number	041-K001-42
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	
Model name	LW 300A-LUX 2.0
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data	
Power supply	3x400V 50Hz
Off-peak product	n/a

Outdoor Air/Water EN 14511-4 | Heating	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

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

EN 14825 | Average Climate		
	Low temperature	Medium temperature
ηs	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

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level outdoor	68 dB(A)	68 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	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		
COP Tj = -15°C (if TOL		
Cdh Tj = -15 °C		

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	68 dB(A)	68 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	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

Model LW 300(L)	
Model name	LW 300(L)
Application	Heating (medium temp)
Units	Indoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data	
Power supply	3x400V 50Hz
Off-peak product	n/a

Outdoor Air/Water EN 14511-4 | Heating	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 12102-1 | Average Climate	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 | Average Climate	Low temperature	Medium temperature
ηs	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

EN 12102-1 | Colder Climate

	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 | Colder Climate

	Low temperature	Medium temperature
ηs	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		
COP Tj = -15°C (if TOL		
Cdh Tj = -15 °C		

EN 12102-1 | Warmer Climate

	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 | Warmer Climate

	Low temperature	Medium temperature
ηs	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