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Login

Summary of	WWC 220 H/X	Reg. No.	041-K001-35
Certificate Holder			
Name	ait-deutschland GmbH		
Address	Industriestr. 3	Zip	95359
City	Kasendorf	Country	Germany
Certification Body	BRE Global Limited		
Subtype title	WWC 220 H/X		
Heat Pump Type	Water/Water		
Refrigerant	R407c		
Mass of Refrigerant	4.5 kg		
Certification Date	06.09.2019		

Model: WWC 220H/X

Configure model	
Model name	WWC 220H/X
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	21.80 kW	20.33 kW
El input	3.82 kW	5.63 kW
COP	5.70	3.61

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

Average Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	56 dB(A)	56 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	241 %	170 %
Prated	21.80 kW	20.37 kW
SCOP	6.23	4.45
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	21.83 kW	20.54 kW
COP Tj = -7°C	5.78	3.64
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	21.99 kW	21.12 kW
COP Tj = +2°C	6.19	4.39
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	22.13 kW	21.48 kW
COP Tj = +7°C	6.59	4.98
Cdh Tj = +7 °C	1.00	1.00
Pdh Tj = 12°C	22.28 kW	21.83 kW

COP Tj = 12°C	6.99	5.69
Cdh Tj = +12 °C	1.00	1.00
Pdh Tj = Tbiv	21.80 kW	20.37 kW
COP Tj = Tbiv	5.71	3.46
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	21.80 kW	20.37 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.71	3.46
WTOL	65 °C	65 °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	0.00 kW	0.00 kW
Annual energy consumption Qhe	7231 kWh	9447 kWh

Warmer Climate

EN 14825		
	Low temperature	**Medium temperature**
η_s	244 %	171 %
Prated	21.80 kW	20.37 kW
SCOP	6.29	4.49

Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	21.80 kW	20.37 kW
COP Tj = +2°C	5.71	3.46
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	21.96 kW	20.88 kW
COP Tj = +7°C	6.10	4.04
Cdh Tj = +7 °C	1.00	1.00
Pdh Tj = 12°C	22.18 kW	21.59 kW
COP Tj = 12°C	6.74	5.21
Cdh Tj = +12 °C	1.00	1.00
Pdh Tj = Tbiv	21.80 kW	20.37 kW
COP Tj = Tbiv	5.71	3.46
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	21.80 kW	20.37 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.71	3.46
WTOL	65 °C	65 °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	0.00 kW	0.00 kW
Annual energy consumption Qhe	4629 kWh	6068 kWh

Colder Climate

EN 14825		
	Low temperature	**Medium temperature**
η_s	249 %	175 %
Prated	21.80 kW	20.37 kW
SCOP	6.42	4.58
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	22.01 kW	21.41 kW
COP Tj = -7°C	6.26	4.22
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	22.14 kW	21.72 kW
COP Tj = +2°C	6.62	4.87
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	22.24 kW	21.72 kW
COP Tj = +7°C	6.90	5.47
Cdh Tj = +7 °C	1.00	1.00
Pdh Tj = 12°C	22.26 kW	21.95 kW

COP Tj = 12°C	6.86	5.95
Cdh Tj = +12 °C	1.00	1.00
Pdh Tj = Tbiv	21.80 kW	20.37 kW
COP Tj = Tbiv	5.71	3.46
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	21.80 kW	20.37 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.71	3.46
WTOL	65 °C	65 °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	0.00 kW	0.00 kW
Annual energy consumption Qhe	8375 kWh	10954 kWh
Pdh Tj = -15°C (if TOL<-20°C)	0.01	0.01
COP Tj = -15°C (if TOL<-20°C)	0.01	0.01
Cdh Tj = -15 °C	1.00	1.00