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Summary of	SWCV 122 Inverter	Reg. No.	041-K001-13
Certificate Holder			
Name	ait-deutschland GmbH		
Address	Industriestr. 3	Zip	95359
City	Kasendorf	Country	Germany
Certification Body	BRE Energy & Communications Division		
Name of testing laboratory	WPZ		
Subtype title	SWCV 122 Inverter		
Heat Pump Type	Brine/Water		
Refrigerant	R407c		
Mass Of Refrigerant	2 kg		
Certification Date	12.05.2017		

Model: SWCV 122(H)(K)3 (3~400V)

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	5.06 kW	4.58 kW
El input	1.04 kW	1.46 kW
COP	4.87	3.13
Indoor water flow rate	1.27 m³/h	1.27 m³/h

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

Average Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	44 dB(A)	44 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	201 %	157 %
Prated	11.60 kW	12.40 kW
SCOP	5.22	4.12
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.30 kW	11.10 kW
COP Tj = -7°C	4.52	3.18
Pdh Tj = +2°C	6.30 kW	6.80 kW
COP Tj = +2°C	5.27	4.12
Pdh Tj = +7°C	4.10 kW	4.40 kW
COP Tj = +7°C	5.60	4.67
Pdh Tj = 12°C	2.70 kW	2.60 kW
COP Tj = 12°C	5.78	5.06
Pdh Tj = Tbiv	11.50 kW	12.30 kW
COP Tj = Tbiv	4.26	2.91

Pdh Tj = TOL	11.50 kW	12.30 kW
COP Tj = TOL	4.26	2.91
Cdh	0.99	0.99
WTOL	65 °C	65 °C
Poff	5 W	5 W
PTO	15 W	15 W
PSB	7 W	7 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	4588 kWh	6220 kWh

Warmer Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	44 dB(A)	44 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	204 %	158 %
Prated	11.60 kW	12.40 kW

SCOP	5.30	4.15
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	11.50 kW	12.30 kW
COP Tj = +2°C	4.26	2.91
Pdh Tj = +7°C	7.60 kW	8.10 kW
COP Tj = +7°C	5.12	3.74
Pdh Tj = 12°C	3.40 kW	3.60 kW
COP Tj = 12°C	5.75	4.85
Pdh Tj = Tbiv	11.50 kW	12.30 kW
COP Tj = Tbiv	4.26	2.91
Pdh Tj = TOL	11.50 kW	12.30 kW
COP Tj = TOL	4.26	2.91
Cdh	0.99	0.99
WTOL	65 °C	65 °C
Poff	5 W	5 W
PTO	15 W	15 W
PSB	7 W	7 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	2924 kWh	3995 kWh

Colder Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	44 dB(A)	44 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	208 %	162 %
Prated	11.60 kW	12.40 kW
SCOP	5.40	4.26
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.10 kW	7.60 kW
COP Tj = -7°C	5.26	3.94
Pdh Tj = +2°C	4.30 kW	4.70 kW
COP Tj = +2°C	5.62	4.58
Pdh Tj = +7°C	2.80 kW	3.00 kW
COP Tj = +7°C	6.01	5.11
Pdh Tj = 12°C	2.70 kW	2.60 kW

COP Tj = 12°C	5.44	4.98
Pdh Tj = Tbiv	11.50 kW	12.30 kW
COP Tj = Tbiv	4.26	2.91
Pdh Tj = TOL	11.50 kW	12.30 kW
COP Tj = TOL	4.26	2.91
Cdh	0.99	0.99
WTOL	65 °C	65 °C
Poff	5 W	5 W
PTO	15 W	15 W
PSB	7 W	7 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	5293 kWh	7177 kWh

Model: SWCV 122H1 (1~230V)

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	5.06 kW	4.58 kW
El input	1.04 kW	1.46 kW
COP	4.87	3.13
Indoor water flow rate	1.27 m³/h	1.27 m³/h

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

Average Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	44 dB(A)	44 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	201 %	157 %
Prated	11.60 kW	12.40 kW
SCOP	5.25	4.12
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.30 kW	11.10 kW
COP Tj = -7°C	4.52	3.18
Pdh Tj = +2°C	6.30 kW	6.80 kW
COP Tj = +2°C	5.27	4.12
Pdh Tj = +7°C	4.10 kW	4.40 kW
COP Tj = +7°C	5.60	4.67
Pdh Tj = 12°C	2.70 kW	2.60 kW
COP Tj = 12°C	5.78	5.06
Pdh Tj = Tbiv	11.50 kW	12.30 kW
COP Tj = Tbiv	4.26	2.91

Pdh Tj = TOL	11.50 kW	12.30 kW
COP Tj = TOL	4.26	2.91
Cdh	0.99	0.99
WTOL	65 °C	65 °C
Poff	5 W	5 W
PTO	15 W	15 W
PSB	7 W	7 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	4588 kWh	6220 kWh

Warmer Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	44 dB(A)	44 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	204 %	158 %
Prated	11.60 kW	12.40 kW

SCOP	5.30	4.15
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	11.50 kW	12.30 kW
COP Tj = +2°C	4.26	2.91
Pdh Tj = +7°C	7.60 kW	8.10 kW
COP Tj = +7°C	5.12	3.74
Pdh Tj = 12°C	3.40 kW	3.60 kW
COP Tj = 12°C	5.75	4.85
Pdh Tj = Tbiv	11.50 kW	12.30 kW
COP Tj = Tbiv	4.26	2.91
Pdh Tj = TOL	11.50 kW	12.30 kW
COP Tj = TOL	4.26	2.91
Cdh	0.99	0.99
WTOL	65 °C	65 °C
Poff	5 W	5 W
PTO	15 W	15 W
PSB	7 W	7 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	2924 kWh	3995 kWh

Colder Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	44 dB(A)	44 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	208 %	162 %
Prated	11.60 kW	12.40 kW
SCOP	5.41	4.25
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.10 kW	7.60 kW
COP Tj = -7°C	5.26	3.94
Pdh Tj = +2°C	4.30 kW	4.70 kW
COP Tj = +2°C	5.62	4.58
Pdh Tj = +7°C	2.80 kW	3.00 kW
COP Tj = +7°C	6.01	5.11
Pdh Tj = 12°C	2.70 kW	2.60 kW

COP Tj = 12°C	5.44	4.98
Pdh Tj = Tbiv	11.50 kW	12.30 kW
COP Tj = Tbiv	4.26	2.91
Pdh Tj = TOL	11.50 kW	12.30 kW
COP Tj = TOL	4.26	2.91
Cdh	0.99	0.99
WTOL	65 °C	65 °C
Poff	5 W	5 W
PTO	15 W	15 W
PSB	7 W	7 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	5293 kWh	7177 kWh

Model: WZSV 122(H)(K)3M

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	5.06 kW	4.58 kW
El input	1.04 kW	1.46 kW
COP	4.87	3.13
Indoor water flow rate	1.27 m³/h	1.27 m³/h

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

Average Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	44 dB(A)	44 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	201 %	157 %
Prated	11.60 kW	12.40 kW
SCOP	5.22	4.12
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.30 kW	11.10 kW
COP Tj = -7°C	4.52	3.18
Pdh Tj = +2°C	6.30 kW	6.80 kW
COP Tj = +2°C	5.27	4.12
Pdh Tj = +7°C	4.10 kW	4.40 kW
COP Tj = +7°C	5.60	4.67
Pdh Tj = 12°C	2.70 kW	2.60 kW
COP Tj = 12°C	5.78	5.06
Pdh Tj = Tbiv	11.50 kW	12.30 kW
COP Tj = Tbiv	4.26	2.91

Pdh Tj = TOL	11.50 kW	12.30 kW
COP Tj = TOL	4.26	2.91
Cdh	0.99	0.99
WTOL	65 °C	65 °C
Poff	5 W	5 W
PTO	15 W	15 W
PSB	7 W	7 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	4588 kWh	6220 kWh

Warmer Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	44 dB(A)	44 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	204 %	158 %
Prated	11.60 kW	12.40 kW

SCOP	5.30	4.15
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	11.50 kW	12.30 kW
COP Tj = +2°C	4.26	2.91
Pdh Tj = +7°C	7.60 kW	8.10 kW
COP Tj = +7°C	5.12	3.74
Pdh Tj = 12°C	3.40 kW	3.60 kW
COP Tj = 12°C	5.75	4.85
Pdh Tj = Tbiv	11.50 kW	12.30 kW
COP Tj = Tbiv	4.26	2.91
Pdh Tj = TOL	11.50 kW	12.30 kW
COP Tj = TOL	4.26	2.91
Cdh	0.99	0.99
WTOL	65 °C	65 °C
Poff	5 W	5 W
PTO	15 W	15 W
PSB	7 W	7 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	2924 kWh	3995 kWh

Colder Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	44 dB(A)	44 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	208 %	162 %
Prated	11.60 kW	12.40 kW
SCOP	5.40	4.26
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.10 kW	7.60 kW
COP Tj = -7°C	5.26	3.94
Pdh Tj = +2°C	4.30 kW	4.70 kW
COP Tj = +2°C	5.62	4.58
Pdh Tj = +7°C	2.80 kW	3.00 kW
COP Tj = +7°C	6.01	5.11
Pdh Tj = 12°C	2.70 kW	2.60 kW

COP Tj = 12°C	5.44	4.98
Pdh Tj = Tbiv	11.50 kW	12.30 kW
COP Tj = Tbiv	4.26	2.91
Pdh Tj = TOL	11.50 kW	12.30 kW
COP Tj = TOL	4.26	2.91
Cdh	0.99	0.99
WTOL	65 °C	65 °C
Poff	5 W	5 W
PTO	15 W	15 W
PSB	7 W	7 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	5293 kWh	7177 kWh

Model: PWZSV 122H3S (3~400V)

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	5.06 kW	4.58 kW
El input	1.04 kW	1.46 kW
COP	4.87	3.13
Indoor water flow rate	1.27 m³/h	1.27 m³/h

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

Average Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	44 dB(A)	44 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	201 %	157 %
Prated	11.60 kW	12.40 kW
SCOP	5.22	4.12
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.30 kW	11.10 kW
COP Tj = -7°C	4.52	3.18
Pdh Tj = +2°C	6.30 kW	6.80 kW
COP Tj = +2°C	5.27	4.12
Pdh Tj = +7°C	4.10 kW	4.40 kW
COP Tj = +7°C	5.60	4.67
Pdh Tj = 12°C	2.70 kW	2.60 kW
COP Tj = 12°C	5.78	5.06
Pdh Tj = Tbiv	11.50 kW	12.30 kW
COP Tj = Tbiv	4.26	2.91

Pdh Tj = TOL	11.50 kW	12.30 kW
COP Tj = TOL	4.26	2.91
Cdh	0.99	0.99
WTOL	65 °C	65 °C
Poff	5 W	5 W
PTO	15 W	15 W
PSB	7 W	7 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	4588 kWh	6220 kWh

Warmer Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	44 dB(A)	44 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	204 %	158 %
Prated	11.60 kW	12.40 kW

SCOP	5.30	4.15
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	11.50 kW	12.30 kW
COP Tj = +2°C	4.26	2.91
Pdh Tj = +7°C	7.60 kW	8.10 kW
COP Tj = +7°C	5.12	3.74
Pdh Tj = 12°C	3.40 kW	3.60 kW
COP Tj = 12°C	5.75	4.85
Pdh Tj = Tbiv	11.50 kW	12.30 kW
COP Tj = Tbiv	4.26	2.91
Pdh Tj = TOL	11.50 kW	12.30 kW
COP Tj = TOL	4.26	2.91
Cdh	0.99	0.99
WTOL	65 °C	65 °C
Poff	5 W	5 W
PTO	15 W	15 W
PSB	7 W	7 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	2924 kWh	3995 kWh

Colder Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	44 dB(A)	44 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	208 %	162 %
Prated	11.60 kW	12.40 kW
SCOP	5.40	4.26
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.10 kW	7.60 kW
COP Tj = -7°C	5.26	3.94
Pdh Tj = +2°C	4.30 kW	4.70 kW
COP Tj = +2°C	5.62	4.58
Pdh Tj = +7°C	2.80 kW	3.00 kW
COP Tj = +7°C	6.01	5.11
Pdh Tj = 12°C	2.70 kW	2.60 kW

COP Tj = 12°C	5.44	4.98
Pdh Tj = Tbiv	11.50 kW	12.30 kW
COP Tj = Tbiv	4.26	2.91
Pdh Tj = TOL	11.50 kW	12.30 kW
COP Tj = TOL	4.26	2.91
Cdh	0.99	0.99
WTOL	65 °C	65 °C
Poff	5 W	5 W
PTO	15 W	15 W
PSB	7 W	7 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	5293 kWh	7177 kWh

Model: PWZSV 122H2S (3~230V)

General Data	
Power supply	3x230V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	5.06 kW	4.58 kW
El input	1.04 kW	1.46 kW
COP	4.87	3.13
Indoor water flow rate	1.27 m³/h	1.27 m³/h

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

Average Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	44 dB(A)	44 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	201 %	157 %
Prated	11.60 kW	12.40 kW
SCOP	5.22	4.12
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.30 kW	11.10 kW
COP Tj = -7°C	4.52	3.18
Pdh Tj = +2°C	6.30 kW	6.80 kW
COP Tj = +2°C	5.27	4.12
Pdh Tj = +7°C	4.10 kW	4.40 kW
COP Tj = +7°C	5.60	4.67
Pdh Tj = 12°C	2.70 kW	2.60 kW
COP Tj = 12°C	5.78	5.06
Pdh Tj = Tbiv	11.50 kW	12.30 kW
COP Tj = Tbiv	4.26	2.91

Pdh Tj = TOL	11.50 kW	12.30 kW
COP Tj = TOL	4.26	2.91
Cdh	0.99	0.99
WTOL	65 °C	65 °C
Poff	5 W	5 W
PTO	15 W	15 W
PSB	7 W	7 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	4588 kWh	6220 kWh

Warmer Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	44 dB(A)	44 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	204 %	158 %
Prated	11.60 kW	12.40 kW

SCOP	5.30	4.15
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	11.50 kW	12.30 kW
COP Tj = +2°C	4.26	2.91
Pdh Tj = +7°C	7.60 kW	8.10 kW
COP Tj = +7°C	5.12	3.74
Pdh Tj = 12°C	3.40 kW	3.60 kW
COP Tj = 12°C	5.75	4.85
Pdh Tj = Tbiv	11.50 kW	12.30 kW
COP Tj = Tbiv	4.26	2.91
Pdh Tj = TOL	11.50 kW	12.30 kW
COP Tj = TOL	4.26	2.91
Cdh	0.99	0.99
WTOL	65 °C	65 °C
Poff	5 W	5 W
PTO	15 W	15 W
PSB	7 W	7 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	2924 kWh	3995 kWh

Colder Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	44 dB(A)	44 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	208 %	162 %
Prated	11.60 kW	12.40 kW
SCOP	5.40	4.26
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.10 kW	7.60 kW
COP Tj = -7°C	5.26	3.94
Pdh Tj = +2°C	4.30 kW	4.70 kW
COP Tj = +2°C	5.62	4.58
Pdh Tj = +7°C	2.80 kW	3.00 kW
COP Tj = +7°C	6.01	5.11
Pdh Tj = 12°C	2.70 kW	2.60 kW

COP Tj = 12°C	5.44	4.98
Pdh Tj = Tbiv	11.50 kW	12.30 kW
COP Tj = Tbiv	4.26	2.91
Pdh Tj = TOL	11.50 kW	12.30 kW
COP Tj = TOL	4.26	2.91
Cdh	0.99	0.99
WTOL	65 °C	65 °C
Poff	5 W	5 W
PTO	15 W	15 W
PSB	7 W	7 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	5293 kWh	7177 kWh

Model: PWZSV 122H1S (1~230V)

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	5.06 kW	4.58 kW
El input	1.04 kW	1.46 kW
COP	4.87	3.13
Indoor water flow rate	1.27 m³/h	1.27 m³/h

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

Average Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	44 dB(A)	44 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	201 %	157 %
Prated	11.60 kW	12.40 kW
SCOP	5.22	4.12
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.30 kW	11.10 kW
COP Tj = -7°C	4.52	3.18
Pdh Tj = +2°C	6.30 kW	6.80 kW
COP Tj = +2°C	5.27	4.12
Pdh Tj = +7°C	4.10 kW	4.40 kW
COP Tj = +7°C	5.60	4.67
Pdh Tj = 12°C	2.70 kW	2.60 kW
COP Tj = 12°C	5.78	5.06
Pdh Tj = Tbiv	11.50 kW	12.30 kW
COP Tj = Tbiv	4.26	2.91

Pdh Tj = TOL	11.50 kW	12.30 kW
COP Tj = TOL	4.26	2.91
Cdh	0.99	0.99
WTOL	65 °C	65 °C
Poff	5 W	5 W
PTO	15 W	15 W
PSB	7 W	7 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	4588 kWh	6220 kWh

Warmer Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	44 dB(A)	44 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	204 %	158 %
Prated	11.60 kW	12.40 kW

SCOP	5.30	4.15
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	11.50 kW	12.30 kW
COP Tj = +2°C	4.26	2.91
Pdh Tj = +7°C	7.60 kW	8.10 kW
COP Tj = +7°C	5.12	3.74
Pdh Tj = 12°C	3.40 kW	3.60 kW
COP Tj = 12°C	5.75	4.85
Pdh Tj = Tbiv	11.50 kW	12.30 kW
COP Tj = Tbiv	4.26	2.91
Pdh Tj = TOL	11.50 kW	12.30 kW
COP Tj = TOL	4.26	2.91
Cdh	0.99	0.99
WTOL	65 °C	65 °C
Poff	5 W	5 W
PTO	15 W	15 W
PSB	7 W	7 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	2924 kWh	3995 kWh

Colder Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	44 dB(A)	44 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	208 %	162 %
Prated	11.60 kW	12.40 kW
SCOP	5.40	4.26
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.10 kW	7.60 kW
COP Tj = -7°C	5.26	3.94
Pdh Tj = +2°C	4.30 kW	4.70 kW
COP Tj = +2°C	5.62	4.58
Pdh Tj = +7°C	2.80 kW	3.00 kW
COP Tj = +7°C	6.01	5.11
Pdh Tj = 12°C	2.70 kW	2.60 kW

COP Tj = 12°C	5.44	4.98
Pdh Tj = Tbiv	11.50 kW	12.30 kW
COP Tj = Tbiv	4.26	2.91
Pdh Tj = TOL	11.50 kW	12.30 kW
COP Tj = TOL	4.26	2.91
Cdh	0.99	0.99
WTOL	65 °C	65 °C
Poff	5 W	5 W
PTO	15 W	15 W
PSB	7 W	7 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	5293 kWh	7177 kWh