Subtype SWCV 122 Inverter

Certificate Holder	ait-deutschland GmbH
Address	Industriestr. 3
ZIP	95359
City	Kasendorf
Country	DE
Certification Body	BRE Global Limited
Subtype title	SWCV 122 Inverter
Registration number	041-K001-13
Heat Pump Type	Brine/Water
Refrigerant	R407c
Mass of Refrigerant	2 kg
Certification Date	12.05.2017
Testing basis	Transitional Rules
Testing laboratory	RISE Research Institutes of Sweden

Model alpha innotec SWCV 122(H)(K)3 (3~400V)	
Model name	alpha innotec SWCV 122(H)(K)3 (3~400V)
Application	Heating (medium temp)
Units	Indoor
Climate zone (for heating)	n/a
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

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

Brine/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed

EN 14511-2 | Heating

	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

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
ηs	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 or Pdh Tj = Tdesignh if TOL < Tdesignh	11.50 kW	12.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.26	2.91
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	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 or Pdh Tj = Tdesignh if TOL < Tdesignh	11.50 kW	12.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.26	2.91
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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

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

EN 14825 | Warmer Climate		
	Low temperature	Medium temperature
ηs	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 or Pdh Tj = Tdesignh if TOL < Tdesignh	11.50 kW	12.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.26	2.91
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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

Model alpha innotec SWCV 122H1 (1~230V)	
Model name	alpha innotec SWCV 122H1 (1~230V)
Application	Heating (medium temp)
Units	Indoor
Climate zone (for heating)	n/a
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data	
Power supply	1x230V 50Hz
Off-peak product	n/a

Brine/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed

EN 14511-2 | Heating

	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

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
ηs	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 or Pdh Tj = Tdesignh if TOL < Tdesignh	11.50 kW	12.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.26	2.91
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	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 or Pdh Tj = Tdesignh if TOL < Tdesignh	11.50 kW	12.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.26	2.91
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	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 or Pdh Tj = Tdesignh if TOL < Tdesignh	11.50 kW	12.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.26	2.91
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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

Model alpha innotec WZSV 122(H)(K)3M	
Model name	alpha innotec WZSV 122(H)(K)3M
Application	Heating (medium temp)
Units	Indoor
Climate zone (for heating)	n/a
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

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

Brine/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed

EN 14511-2 | Heating

	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

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
ηs	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 or Pdh Tj = Tdesignh if TOL < Tdesignh	11.50 kW	12.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.26	2.91
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	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 or Pdh Tj = Tdesignh if TOL < Tdesignh	11.50 kW	12.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.26	2.91
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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

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

EN 14825 | Warmer Climate		
	Low temperature	Medium temperature
ηs	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 or Pdh Tj = Tdesignh if TOL < Tdesignh	11.50 kW	12.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.26	2.91
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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

Model alpha innotec PWZSV 122H3S (3~400V)	
Model name	alpha innotec PWZSV 122H3S (3~400V)
Application	Heating (medium temp)
Units	Indoor
Climate zone (for heating)	n/a
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

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

Brine/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed

EN 14511-2 | Heating

	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

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
ηs	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 or Pdh Tj = Tdesignh if TOL < Tdesignh	11.50 kW	12.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.26	2.91
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	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 or Pdh Tj = Tdesignh if TOL < Tdesignh	11.50 kW	12.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.26	2.91
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	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 or Pdh Tj = Tdesignh if TOL < Tdesignh	11.50 kW	12.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.26	2.91
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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

Model alpha innotec PWZSV 122H2S (3~230V)	
Model name	alpha innotec PWZSV 122H2S (3~230V)
Application	Heating (medium temp)
Units	Indoor
Climate zone (for heating)	n/a
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data	
Power supply	3x230V 50Hz
Off-peak product	n/a

Brine/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed

EN 14511-2 | Heating

	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

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
ηs	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 or Pdh Tj = Tdesignh if TOL < Tdesignh	11.50 kW	12.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.26	2.91
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	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 or Pdh Tj = Tdesignh if TOL < Tdesignh	11.50 kW	12.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.26	2.91
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	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 or Pdh Tj = Tdesignh if TOL < Tdesignh	11.50 kW	12.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.26	2.91
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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

Model alpha innotec PWZSV 122H1S (1~230V)	
Model name	alpha innotec PWZSV 122H1S (1~230V)
Application	Heating (medium temp)
Units	Indoor
Climate zone (for heating)	n/a
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data	
Power supply	1x230V 50Hz
Off-peak product	n/a

Brine/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed

EN 14511-2 | Heating

	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

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
ηs	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 or Pdh Tj = Tdesignh if TOL < Tdesignh	11.50 kW	12.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.26	2.91
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	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 or Pdh Tj = Tdesignh if TOL < Tdesignh	11.50 kW	12.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.26	2.91
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	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 or Pdh Tj = Tdesignh if TOL < Tdesignh	11.50 kW	12.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.26	2.91
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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

Model NOVELAN SICV 12.2(H)(K)3	
Model name	NOVELAN SICV 12.2(H)(K)3
Application	Heating (medium temp)
Units	Indoor
Climate zone (for heating)	n/a
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data	
Power supply	n/a
Off-peak product	n/a

Brine/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed

EN 14511-2 | Heating

	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

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
ηs	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 or Pdh Tj = Tdesignh if TOL < Tdesignh	11.50 kW	12.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.26	2.91
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	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 or Pdh Tj = Tdesignh if TOL < Tdesignh	11.50 kW	12.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.26	2.91
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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

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

EN 14825 | Warmer Climate		
	Low temperature	Medium temperature
ηs	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 or Pdh Tj = Tdesignh if TOL < Tdesignh	11.50 kW	12.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.26	2.91
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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

Model NOVELAN WSV 12.2(H)(K)3M	
Model name	NOVELAN WSV 12.2(H)(K)3M
Application	Heating (medium temp)
Units	Indoor
Climate zone (for heating)	n/a
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data	
Power supply	n/a
Off-peak product	n/a

Brine/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed

EN 14511-2 | Heating

	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

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
ηs	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 or Pdh Tj = Tdesignh if TOL < Tdesignh	11.50 kW	12.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.26	2.91
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	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 or Pdh Tj = Tdesignh if TOL < Tdesignh	11.50 kW	12.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.26	2.91
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	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 or Pdh Tj = Tdesignh if TOL < Tdesignh	11.50 kW	12.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.26	2.91
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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