

Subtype SW 172 3~

Certificate Holder	ait-deutschland GmbH
Address	Industriestr. 3
ZIP	95359
City	Kasendorf
Country	DE
Certification Body	BRE Global Limited
Subtype title	SW 172 3~
Registration number	041-K001-07
Heat Pump Type	Brine/Water
Refrigerant	R410A
Mass of Refrigerant	2.38 kg
Certification Date	12.05.2017
Testing basis	Transitional Rules

Model alpha innotec SW 172H3

Model name	alpha innotec SW 172H3
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
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EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	13.50 kW	11.76 kW
El input	2.66 kW	4.00 kW
COP	5.08	2.94

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	48 dB(A)	48 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	206 %	149 %
Prated	19.17 kW	17.85 kW
SCOP	5.35	3.92
Tbiv	-7 °C	-7 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	16.90 kW	15.80 kW
COP Tj = -7°C	5.07	3.27
Pdh Tj = +2°C	17.10 kW	16.30 kW
COP Tj = +2°C	5.38	3.90
Pdh Tj = +7°C	17.20 kW	16.60 kW
COP Tj = +7°C	5.69	4.39
Pdh Tj = 12°C	17.30 kW	16.90 kW
COP Tj = 12°C	6.04	4.99
Pdh Tj = Tbiv	16.90 kW	15.80 kW
COP Tj = Tbiv	5.07	3.27

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.90 kW	15.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.93	3.07
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.90	0.90
WTOL	70 °C	70 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.27 kW	2.25 kW
Annual energy consumption Qhe	7397 kWh	9400 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	48 dB(A)	48 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	213 %	153 %
Prated	19.10 kW	17.68 kW
SCOP	5.52	4.04
Tbiv	-18 °C	-18 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	17.10 kW	16.20 kW
COP Tj = -7°C	5.43	3.75
Pdh Tj = +2°C	17.20 kW	16.50 kW
COP Tj = +2°C	5.71	4.29
Pdh Tj = +7°C	17.30 kW	16.80 kW
COP Tj = +7°C	5.94	4.79
Pdh Tj = 12°C	17.30 kW	17.00 kW
COP Tj = 12°C	5.99	5.24
Pdh Tj = Tbiv	17.00 kW	15.80 kW
COP Tj = Tbiv	5.18	3.30
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.90 kW	15.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.93	3.07
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.90	0.90
WTOL	70 °C	70 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W

PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.11 kW	2.08 kW
Annual energy consumption Q _{he}	8482 kWh	10799 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	48 dB(A)	48 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	208 %	150 %
Prated	19.82 kW	18.47 kW
SCOP	5.40	3.94
T _{biv}	4 °C	4 °C
TOL	-22 °C	-22 °C
P _{dh} T _j = +2°C	16.90 kW	15.60 kW
COP T _j = +2°C	4.93	3.07
P _{dh} T _j = +7°C	17.00 kW	16.10 kW
COP T _j = +7°C	5.33	3.62
P _{dh} T _j = 12°C	17.20 kW	16.70 kW
COP T _j = 12°C	5.82	4.58
P _{dh} T _j = T _{biv}	17.00 kW	15.80 kW
COP T _j = T _{biv}	5.16	3.31
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	16.90 kW	15.60 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	4.93	3.07
C _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	0.90	0.90
WTOL	70 °C	70 °C
P _{off}	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.93 kW	2.87 kW
Annual energy consumption Q _{he}	4908 kWh	6257 kWh

Model alpha innotec SWC 172(H)(K)3

Model name	alpha innotec SWC 172(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	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
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EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	13.50 kW	11.76 kW
El input	2.66 kW	4.00 kW
COP	5.08	2.94

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	48 dB(A)	48 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	206 %	149 %
Prated	19.17 kW	17.85 kW
SCOP	5.35	3.92
Tbiv	-7 °C	-7 °C
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Pdh Tj = +7°C	17.20 kW	16.60 kW
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Pdh Tj = 12°C	17.30 kW	16.90 kW
COP Tj = 12°C	6.04	4.99
Pdh Tj = Tbiv	16.90 kW	15.80 kW
COP Tj = Tbiv	5.07	3.27

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.90 kW	15.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.93	3.07
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.90	0.90
WTOL	70 °C	70 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.27 kW	2.25 kW
Annual energy consumption Qhe	7397 kWh	9400 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	48 dB(A)	48 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	213 %	153 %
Prated	19.10 kW	17.68 kW
SCOP	5.52	4.04
Tbiv	-18 °C	-18 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	17.10 kW	16.20 kW
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Pdh Tj = +2°C	17.20 kW	16.50 kW
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Pdh Tj = +7°C	17.30 kW	16.80 kW
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Pdh Tj = 12°C	17.30 kW	17.00 kW
COP Tj = 12°C	5.99	5.24
Pdh Tj = Tbiv	17.00 kW	15.80 kW
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Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.90	0.90
WTOL	70 °C	70 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W

PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.11 kW	2.08 kW
Annual energy consumption Q _{he}	8482 kWh	10799 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	48 dB(A)	48 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	208 %	150 %
Prated	19.82 kW	18.47 kW
SCOP	5.40	3.94
T _{biv}	4 °C	4 °C
TOL	-22 °C	-22 °C
P _{dh} T _j = +2°C	16.90 kW	15.60 kW
COP T _j = +2°C	4.93	3.07
P _{dh} T _j = +7°C	17.00 kW	16.10 kW
COP T _j = +7°C	5.33	3.62
P _{dh} T _j = 12°C	17.20 kW	16.70 kW
COP T _j = 12°C	5.82	4.58
P _{dh} T _j = T _{biv}	17.00 kW	15.80 kW
COP T _j = T _{biv}	5.16	3.31
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	16.90 kW	15.60 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	4.93	3.07
C _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	0.90	0.90
WTOL	70 °C	70 °C
P _{off}	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.93 kW	2.87 kW
Annual energy consumption Q _{he}	4908 kWh	6257 kWh

Model NOVELAN SI 17.2H3

Model name	NOVELAN SI 17.2H3
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
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EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	13.50 kW	11.76 kW
El input	2.66 kW	4.00 kW
COP	5.08	2.94

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	48 dB(A)	48 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	206 %	149 %
Prated	19.17 kW	17.85 kW
SCOP	5.35	3.92
Tbiv	-7 °C	-7 °C
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COP Tj = -7°C	5.07	3.27
Pdh Tj = +2°C	17.10 kW	16.30 kW
COP Tj = +2°C	5.38	3.90
Pdh Tj = +7°C	17.20 kW	16.60 kW
COP Tj = +7°C	5.69	4.39
Pdh Tj = 12°C	17.30 kW	16.90 kW
COP Tj = 12°C	6.04	4.99
Pdh Tj = Tbiv	16.90 kW	15.80 kW
COP Tj = Tbiv	5.07	3.27

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.90 kW	15.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.93	3.07
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.90	0.90
WTOL	70 °C	70 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.27 kW	2.25 kW
Annual energy consumption Qhe	7397 kWh	9400 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	48 dB(A)	48 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	213 %	153 %
Prated	19.10 kW	17.68 kW
SCOP	5.52	4.04
Tbiv	-18 °C	-18 °C
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COP Tj = 12°C	5.99	5.24
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Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.90 kW	15.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.93	3.07
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.90	0.90
WTOL	70 °C	70 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W

PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.11 kW	2.08 kW
Annual energy consumption Q _{he}	8482 kWh	10799 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	48 dB(A)	48 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	208 %	150 %
Prated	19.82 kW	18.47 kW
SCOP	5.40	3.94
T _{biv}	4 °C	4 °C
TOL	-22 °C	-22 °C
P _{dh} T _j = +2°C	16.90 kW	15.60 kW
COP T _j = +2°C	4.93	3.07
P _{dh} T _j = +7°C	17.00 kW	16.10 kW
COP T _j = +7°C	5.33	3.62
P _{dh} T _j = 12°C	17.20 kW	16.70 kW
COP T _j = 12°C	5.82	4.58
P _{dh} T _j = T _{biv}	17.00 kW	15.80 kW
COP T _j = T _{biv}	5.16	3.31
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	16.90 kW	15.60 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	4.93	3.07
C _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	0.90	0.90
WTOL	70 °C	70 °C
P _{off}	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.93 kW	2.87 kW
Annual energy consumption Q _{he}	4908 kWh	6257 kWh

Model NOVELAN SIC 17.2H3

Model name	NOVELAN SIC 17.2H3
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
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EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	13.50 kW	11.76 kW
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COP	5.08	2.94

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	48 dB(A)	48 dB(A)

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Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.90	0.90
WTOL	70 °C	70 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.27 kW	2.25 kW
Annual energy consumption Qhe	7397 kWh	9400 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	48 dB(A)	48 dB(A)

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ηs	213 %	153 %
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Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.90	0.90
WTOL	70 °C	70 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W

PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.11 kW	2.08 kW
Annual energy consumption Q _{he}	8482 kWh	10799 kWh

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	Low temperature	Medium temperature
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WTOL	70 °C	70 °C
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