

Subtype SW 192 3~

Certificate Holder	ait-deutschland GmbH
Address	Industriestr. 3
ZIP	95359
City	Kasendorf
Country	DE
Certification Body	BRE Global Limited
Subtype title	SW 192 3~
Registration number	041-K001-08
Heat Pump Type	Brine/Water
Refrigerant	R410A
Mass of Refrigerant	2.8 kg
Certification Date	12.05.2017
Testing basis	Transitional Rules

**Model alpha innotec SW 192H3**

Model name	alpha innotec SW 192H3
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	18.60 kW	16.36 kW
EI input	3.82 kW	5.68 kW
COP	4.87	2.88

**EN 12102-1 | Average Climate**

	Low temperature	Medium temperature
Sound power level indoor	50 dB(A)	50 dB(A)

**EN 14825 | Average Climate**

	Low temperature	Medium temperature
$\eta_s$	205 %	143 %
Prated	20.99 kW	18.85 kW
SCOP	5.33	3.77
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	18.57 kW	16.67 kW
COP Tj = -7°C	5.04	3.09
Pdh Tj = +2°C	18.77 kW	17.48 kW
COP Tj = +2°C	5.35	3.75
Pdh Tj = +7°C	18.97 kW	17.98 kW
COP Tj = +7°C	5.67	4.25
Pdh Tj = 12°C	19.16 kW	18.48 kW
COP Tj = 12°C	5.95	4.81
Pdh Tj = Tbiv	18.57 kW	16.67 kW
COP Tj = Tbiv	5.04	3.08

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	18.46 kW	16.36 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.88	2.88
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	2.53 kW	2.49 kW
Annual energy consumption Qhe	8139 kWh	10328 kWh

**EN 12102-1 | Colder Climate**

	Low temperature	Medium temperature
Sound power level indoor	50 dB(A)	50 dB(A)

**EN 14825 | Colder Climate**

	Low temperature	Medium temperature
ηs	212 %	148 %
Prated	20.83 kW	18.69 kW
SCOP	5.50	3.89
Tbiv	-18 °C	-18 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	18.81 kW	17.32 kW
COP Tj = -7°C	5.42	3.60
Pdh Tj = +2°C	18.98 kW	17.90 kW
COP Tj = +2°C	5.69	4.15
Pdh Tj = +7°C	19.11 kW	18.32 kW
COP Tj = +7°C	5.90	4.64
Pdh Tj = 12°C	19.14 kW	18.66 kW
COP Tj = 12°C	5.81	5.00
Pdh Tj = Tbiv	18.64 kW	16.72 kW
COP Tj = Tbiv	5.15	3.13
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	18.46 kW	16.36 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.88	2.88
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	2.37 kW	2.33 kW
Annual energy consumption Qhe	9334 kWh	11851 kWh

**EN 12102-1 | Warmer Climate**

Sound power level indoor	Low temperature 50 dB(A)	Medium temperature 50 dB(A)
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**EN 14825 | Warmer Climate**

	Low temperature	Medium temperature
ηs	207 %	144 %
Prated	21.73 kW	19.53 kW
SCOP	5.38	3.80
Tbiv	4 °C	4 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	18.46 kW	16.36 kW
COP Tj = +2°C	4.88	2.88
Pdh Tj = +7°C	18.75 kW	17.16 kW
COP Tj = +7°C	5.31	3.46
Pdh Tj = 12°C	19.04 kW	18.16 kW
COP Tj = 12°C	5.79	4.45
Pdh Tj = Tbiv	18.63 kW	16.73 kW
COP Tj = Tbiv	5.13	3.14
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	18.46 kW	16.36 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.88	2.88
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	3.27 kW	3.17 kW
Annual energy consumption Qhe	5394 kWh	6864 kWh

**Model alpha innotec SWC 192(H)(K)3**

Model name	alpha innotec SWC 192(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

**EN 14511-2 | Heating**

	Low temperature	Medium temperature
Heat output	18.60 kW	16.36 kW
EI input	3.82 kW	5.68 kW
COP	4.87	2.88

**EN 12102-1 | Average Climate**

	Low temperature	Medium temperature
Sound power level indoor	50 dB(A)	50 dB(A)

**EN 14825 | Average Climate**

	Low temperature	Medium temperature
$\eta_s$	205 %	143 %
Prated	20.99 kW	18.85 kW
SCOP	5.33	3.77
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	18.57 kW	16.67 kW
COP Tj = -7°C	5.04	3.09
Pdh Tj = +2°C	18.77 kW	17.48 kW
COP Tj = +2°C	5.35	3.75
Pdh Tj = +7°C	18.97 kW	17.98 kW
COP Tj = +7°C	5.67	4.25
Pdh Tj = 12°C	19.16 kW	18.48 kW
COP Tj = 12°C	5.95	4.81
Pdh Tj = Tbiv	18.57 kW	16.67 kW
COP Tj = Tbiv	5.04	3.09

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	18.46 kW	16.36 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.88	2.88
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	2.53 kW	2.49 kW
Annual energy consumption Qhe	8139 kWh	10328 kWh

**EN 12102-1 | Colder Climate**

	Low temperature	Medium temperature
Sound power level indoor	50 dB(A)	50 dB(A)

**EN 14825 | Colder Climate**

	Low temperature	Medium temperature
ηs	212 %	148 %
Prated	20.83 kW	18.69 kW
SCOP	5.50	3.89
Tbiv	-18 °C	-18 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	18.81 kW	17.32 kW
COP Tj = -7°C	5.42	3.60
Pdh Tj = +2°C	18.98 kW	17.90 kW
COP Tj = +2°C	5.69	4.15
Pdh Tj = +7°C	19.11 kW	18.32 kW
COP Tj = +7°C	5.90	4.64
Pdh Tj = 12°C	19.14 kW	18.66 kW
COP Tj = 12°C	5.81	5.00
Pdh Tj = Tbiv	18.64 kW	16.72 kW
COP Tj = Tbiv	5.15	3.13
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	18.46 kW	16.36 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.88	2.88
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	2.37 kW	2.33 kW
Annual energy consumption Qhe	9334 kWh	11851 kWh

**EN 12102-1 | Warmer Climate**

Sound power level indoor	Low temperature 50 dB(A)	Medium temperature 50 dB(A)
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**EN 14825 | Warmer Climate**

	Low temperature	Medium temperature
ηs	207 %	144 %
Prated	21.73 kW	19.53 kW
SCOP	5.38	3.80
Tbiv	4 °C	4 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	18.46 kW	16.36 kW
COP Tj = +2°C	4.88	2.88
Pdh Tj = +7°C	18.75 kW	17.16 kW
COP Tj = +7°C	5.31	3.46
Pdh Tj = 12°C	19.04 kW	18.16 kW
COP Tj = 12°C	5.79	4.45
Pdh Tj = Tbiv	18.63 kW	16.73 kW
COP Tj = Tbiv	5.13	3.14
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	18.46 kW	16.36 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.88	2.88
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	3.27 kW	3.17 kW
Annual energy consumption Qhe	5394 kWh	6864 kWh

**Model NOVELAN SI 19.2H3**

Model name	NOVELAN SI 19.2H3
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

**EN 14511-2 | Heating**

	Low temperature	Medium temperature
Heat output	18.60 kW	16.36 kW
El input	3.82 kW	5.68 kW
COP	4.87	2.88

**EN 12102-1 | Average Climate**

	Low temperature	Medium temperature
Sound power level indoor	50 dB(A)	50 dB(A)

**EN 14825 | Average Climate**

	Low temperature	Medium temperature
$\eta_s$	205 %	143 %
Prated	20.99 kW	18.85 kW
SCOP	5.33	3.77
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	18.57 kW	16.67 kW
COP Tj = -7°C	5.04	3.09
Pdh Tj = +2°C	18.77 kW	17.48 kW
COP Tj = +2°C	5.35	3.75
Pdh Tj = +7°C	18.97 kW	17.98 kW
COP Tj = +7°C	5.67	4.25
Pdh Tj = 12°C	19.16 kW	18.48 kW
COP Tj = 12°C	5.95	4.81
Pdh Tj = Tbiv	18.57 kW	16.67 kW
COP Tj = Tbiv	5.04	3.08

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	18.46 kW	16.36 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.88	2.88
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	2.53 kW	2.49 kW
Annual energy consumption Qhe	8139 kWh	10328 kWh

**EN 12102-1 | Colder Climate**

	Low temperature	Medium temperature
Sound power level indoor	50 dB(A)	50 dB(A)

**EN 14825 | Colder Climate**

	Low temperature	Medium temperature
ηs	212 %	148 %
Prated	20.83 kW	18.69 kW
SCOP	5.50	3.89
Tbiv	-18 °C	-18 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	18.81 kW	17.32 kW
COP Tj = -7°C	5.42	3.60
Pdh Tj = +2°C	18.98 kW	17.90 kW
COP Tj = +2°C	5.69	4.15
Pdh Tj = +7°C	19.11 kW	18.32 kW
COP Tj = +7°C	5.90	4.64
Pdh Tj = 12°C	19.14 kW	18.66 kW
COP Tj = 12°C	5.81	5.00
Pdh Tj = Tbiv	18.64 kW	16.72 kW
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Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	18.46 kW	16.36 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.88	2.88
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	2.37 kW	2.33 kW
Annual energy consumption Qhe	9334 kWh	11851 kWh

**EN 12102-1 | Warmer Climate**

Sound power level indoor	Low temperature 50 dB(A)	Medium temperature 50 dB(A)
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**EN 14825 | Warmer Climate**

	Low temperature	Medium temperature
ηs	207 %	144 %
Prated	21.73 kW	19.53 kW
SCOP	5.38	3.80
Tbiv	4 °C	4 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	18.46 kW	16.36 kW
COP Tj = +2°C	4.88	2.88
Pdh Tj = +7°C	18.75 kW	17.16 kW
COP Tj = +7°C	5.31	3.46
Pdh Tj = 12°C	19.04 kW	18.16 kW
COP Tj = 12°C	5.79	4.45
Pdh Tj = Tbiv	18.63 kW	16.73 kW
COP Tj = Tbiv	5.13	3.14
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	18.46 kW	16.36 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.88	2.88
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	3.27 kW	3.17 kW
Annual energy consumption Qhe	5394 kWh	6864 kWh

**Model NOVELAN SIC 19.2H3**

Model name	NOVELAN SIC 19.2H3
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

**EN 14511-2 | Heating**

	Low temperature	Medium temperature
Heat output	18.60 kW	16.36 kW
El input	3.82 kW	5.68 kW
COP	4.87	2.88

**EN 12102-1 | Average Climate**

	Low temperature	Medium temperature
Sound power level indoor	50 dB(A)	50 dB(A)

**EN 14825 | Average Climate**

	Low temperature	Medium temperature
$\eta_s$	205 %	143 %
Prated	20.99 kW	18.85 kW
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Tbiv	-7 °C	-7 °C
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Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	18.46 kW	16.36 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.88	2.88
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	2.53 kW	2.49 kW
Annual energy consumption Qhe	8139 kWh	10328 kWh

**EN 12102-1 | Colder Climate**

	Low temperature	Medium temperature
Sound power level indoor	50 dB(A)	50 dB(A)

**EN 14825 | Colder Climate**

	Low temperature	Medium temperature
ηs	212 %	148 %
Prated	20.83 kW	18.69 kW
SCOP	5.50	3.89
Tbiv	-18 °C	-18 °C
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COP Tj = +7°C	5.90	4.64
Pdh Tj = 12°C	19.14 kW	18.66 kW
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Pdh Tj = Tbiv	18.64 kW	16.72 kW
COP Tj = Tbiv	5.15	3.13
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	18.46 kW	16.36 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.88	2.88
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	2.37 kW	2.33 kW
Annual energy consumption Qhe	9334 kWh	11851 kWh

**EN 12102-1 | Warmer Climate**

Sound power level indoor	Low temperature 50 dB(A)	Medium temperature 50 dB(A)
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**EN 14825 | Warmer Climate**

	Low temperature	Medium temperature
ηs	207 %	144 %
Prated	21.73 kW	19.53 kW
SCOP	5.38	3.80
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COP Tj = +7°C	5.31	3.46
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COP Tj = 12°C	5.79	4.45
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COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.88	2.88
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	3.27 kW	3.17 kW
Annual energy consumption Qhe	5394 kWh	6864 kWh