

This information was generated by the HP KEYMARK database on 21 Jun 2022

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Summary of	SWCV 162 Inverter	Reg. No.	041-K001-14
Certificate Holder			
Name	ait-deutschland GmbH		
Address	Industriestr. 3	Zip	95359
City	Kasendorf	Country	Germany
Certification Body	BRE Global Limited		
Subtype title	SWCV 162 Inverter		
Heat Pump Type	Brine/Water		
Refrigerant	R407c		
Mass of Refrigerant	2.2 kg		
Certification Date	12.05.2017		
Testing basis	HP Keymark Scheme Transition Rules		

## Model: SWCV 162(H)(K)3

Configure model	
Model name	SWCV 162(H)(K)3
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 14511-4	
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

EN 14511-2		
	Low temperature	Medium temperature
Heat output	9.42 kW	9.06 kW
El input	1.91 kW	1.88 kW
COP	4.92	3.22

### Warmer Climate

This information was generated by the HP KEYMARK database on 21 Jun 2022

### EN 12102-1

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

### EN 14825

	Low temperature	Medium temperature
$\eta_s$	197 %	151 %
Prated	15.90 kW	16.00 kW
SCOP	5.12	3.98
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	15.90 kW	15.40 kW
COP Tj = +2°C	3.89	2.80
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	10.40 kW	10.40 kW
COP Tj = +7°C	4.93	3.61
Cdh Tj = +7 °C	1.00	1.00
Pdh Tj = 12°C	5.80 kW	5.50 kW
COP Tj = 12°C	6.05	4.92
Cdh Tj = +12 °C	0.97	0.97
Pdh Tj = Tbiv	15.90 kW	15.40 kW

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COP Tj = Tbiv	3.89	2.80
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	15.90 kW	15.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.89	2.80
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	65 °C	65 °C
Poff	2 W	2 W
PTO	20 W	20 W
PSB	7 W	7 W
PCK	30 W	30 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	4150 kWh	5365 kWh

## Colder Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	44 dB(A)	44 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	210 %	160 %

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Prated	15.90 kW	16.00 kW
SCOP	5.44	4.19
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	9.80 kW	9.80 kW
COP Tj = -7°C	5.10	3.80
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	6.00 kW	6.00 kW
COP Tj = +2°C	6.10	4.70
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	5.70 kW	5.60 kW
COP Tj = +7°C	6.10	5.00
Cdh Tj = +7 °C	0.97	0.97
Pdh Tj = 12°C	5.70 kW	5.60 kW
COP Tj = 12°C	5.60	5.00
Cdh Tj = +12 °C	0.97	0.97
Pdh Tj = Tbiv	15.90 kW	15.40 kW
COP Tj = Tbiv	3.90	2.80
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	15.90 kW	15.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.90	2.80
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00

This information was generated by the HP KEYMARK database on 21 Jun 2022

WTOL	65 °C	65 °C
Poff	2 W	2 W
PTO	20 W	20 W
PSB	7 W	7 W
PCK	30 W	30 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	7198 kWh	9415 kWh

## Average Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	44 dB(A)	44 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	199 %	154 %
Prated	15.90 kW	16.00 kW
SCOP	5.17	4.05
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C

This information was generated by the HP KEYMARK database on 21 Jun 2022

Pdh Tj = -7°C	14.20 kW	14.20 kW
COP Tj = -7°C	4.19	3.00
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	8.70 kW	8.70 kW
COP Tj = +2°C	5.26	4.10
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	5.70 kW	5.60 kW
COP Tj = +7°C	6.06	4.90
Cdh Tj = +7 °C	1.00	1.00
Pdh Tj = 12°C	5.80 kW	5.50 kW
COP Tj = 12°C	5.88	5.00
Cdh Tj = +12 °C	0.98	0.97
Pdh Tj = Tbiv	15.90 kW	15.40 kW
COP Tj = Tbiv	3.90	2.80
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	15.90 kW	15.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.90	2.80
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	65 °C	65 °C
Poff	2 W	2 W
PTO	20 W	20 W
PSB	7 W	7 W

This information was generated by the HP KEYMARK database on 21 Jun 2022

PCK	30 W	30 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q <sub>he</sub>	6355 kWh	8154 kWh



## Model: WZSV 162(H)(K)3M

Configure model	
Model name	WZSV 162(H)(K)3M
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 14511-4	
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

EN 14511-2		
	Low temperature	Medium temperature
Heat output	9.42 kW	9.06 kW
El input	1.91 kW	1.88 kW
COP	4.92	3.22

### Warmer Climate

This information was generated by the HP KEYMARK database on 21 Jun 2022

### EN 12102-1

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

### EN 14825

	Low temperature	Medium temperature
$\eta_s$	197 %	151 %
Prated	15.90 kW	16.00 kW
SCOP	5.12	3.98
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	15.90 kW	15.40 kW
COP Tj = +2°C	3.89	2.80
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	10.40 kW	10.40 kW
COP Tj = +7°C	4.93	3.61
Cdh Tj = +7 °C	1.00	1.00
Pdh Tj = 12°C	5.80 kW	5.50 kW
COP Tj = 12°C	6.05	4.92
Cdh Tj = +12 °C	0.97	0.97
Pdh Tj = Tbiv	15.90 kW	15.40 kW

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COP Tj = Tbiv	3.89	2.80
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	15.90 kW	15.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.89	2.80
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	65 °C	65 °C
Poff	2 W	2 W
PTO	20 W	20 W
PSB	7 W	7 W
PCK	30 W	30 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	4150 kWh	5365 kWh

## Colder Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	44 dB(A)	44 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	210 %	160 %

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Prated	15.90 kW	16.00 kW
SCOP	5.44	4.19
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	9.80 kW	9.80 kW
COP Tj = -7°C	5.10	3.80
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	6.00 kW	6.00 kW
COP Tj = +2°C	6.10	4.70
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	5.70 kW	5.60 kW
COP Tj = +7°C	6.10	5.00
Cdh Tj = +7 °C	0.97	0.97
Pdh Tj = 12°C	5.70 kW	5.60 kW
COP Tj = 12°C	5.60	5.00
Cdh Tj = +12 °C	0.97	0.97
Pdh Tj = Tbiv	15.90 kW	15.40 kW
COP Tj = Tbiv	3.90	2.80
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	15.90 kW	15.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.90	2.80
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00

This information was generated by the HP KEYMARK database on 21 Jun 2022

WTOL	65 °C	65 °C
Poff	2 W	2 W
PTO	20 W	20 W
PSB	7 W	7 W
PCK	30 W	30 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	7198 kWh	9415 kWh

## Average Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	44 dB(A)	44 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	199 %	154 %
Prated	15.90 kW	16.00 kW
SCOP	5.17	4.05
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C

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Pdh Tj = -7°C	14.20 kW	14.20 kW
COP Tj = -7°C	4.19	3.00
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	8.70 kW	8.70 kW
COP Tj = +2°C	5.26	4.10
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	5.70 kW	5.60 kW
COP Tj = +7°C	6.06	4.90
Cdh Tj = +7 °C	1.00	1.00
Pdh Tj = 12°C	5.80 kW	5.50 kW
COP Tj = 12°C	5.88	5.00
Cdh Tj = +12 °C	0.98	0.97
Pdh Tj = Tbiv	15.90 kW	15.40 kW
COP Tj = Tbiv	3.90	2.80
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	15.90 kW	15.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.90	2.80
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	65 °C	65 °C
Poff	2 W	2 W
PTO	20 W	20 W
PSB	7 W	7 W

This information was generated by the HP KEYMARK database on 21 Jun 2022

PCK	30 W	30 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q <sub>he</sub>	6355 kWh	8154 kWh

## Model: PWZSV 162H3S

Configure model	
Model name	PWZSV 162H3S
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 14511-4	
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

EN 14511-2		
	Low temperature	Medium temperature
Heat output	9.42 kW	9.06 kW
El input	1.91 kW	1.88 kW
COP	4.92	3.22

### Warmer Climate



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### EN 12102-1

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

### EN 14825

	Low temperature	Medium temperature
$\eta_s$	197 %	151 %
Prated	15.90 kW	16.00 kW
SCOP	5.12	3.98
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	15.90 kW	15.40 kW
COP Tj = +2°C	3.89	2.80
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	10.40 kW	10.40 kW
COP Tj = +7°C	4.93	3.61
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COP Tj = Tbiv	3.89	2.80
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	15.90 kW	15.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.89	2.80
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	65 °C	65 °C
Poff	2 W	2 W
PTO	20 W	20 W
PSB	7 W	7 W
PCK	30 W	30 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	4150 kWh	5365 kWh

## Colder Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	44 dB(A)	44 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	210 %	160 %

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COP Tj = -7°C	5.10	3.80
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	6.00 kW	6.00 kW
COP Tj = +2°C	6.10	4.70
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	5.70 kW	5.60 kW
COP Tj = +7°C	6.10	5.00
Cdh Tj = +7 °C	0.97	0.97
Pdh Tj = 12°C	5.70 kW	5.60 kW
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Cdh Tj = +12 °C	0.97	0.97
Pdh Tj = Tbiv	15.90 kW	15.40 kW
COP Tj = Tbiv	3.90	2.80
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	15.90 kW	15.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.90	2.80
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00

This information was generated by the HP KEYMARK database on 21 Jun 2022

WTOL	65 °C	65 °C
Poff	2 W	2 W
PTO	20 W	20 W
PSB	7 W	7 W
PCK	30 W	30 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	7198 kWh	9415 kWh

## Average Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	44 dB(A)	44 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	199 %	154 %
Prated	15.90 kW	16.00 kW
SCOP	5.17	4.05
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C

This information was generated by the HP KEYMARK database on 21 Jun 2022

Pdh Tj = -7°C	14.20 kW	14.20 kW
COP Tj = -7°C	4.19	3.00
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	8.70 kW	8.70 kW
COP Tj = +2°C	5.26	4.10
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	5.70 kW	5.60 kW
COP Tj = +7°C	6.06	4.90
Cdh Tj = +7 °C	1.00	1.00
Pdh Tj = 12°C	5.80 kW	5.50 kW
COP Tj = 12°C	5.88	5.00
Cdh Tj = +12 °C	0.98	0.97
Pdh Tj = Tbiv	15.90 kW	15.40 kW
COP Tj = Tbiv	3.90	2.80
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	15.90 kW	15.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.90	2.80
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	65 °C	65 °C
Poff	2 W	2 W
PTO	20 W	20 W
PSB	7 W	7 W

This information was generated by the HP KEYMARK database on 21 Jun 2022

PCK	30 W	30 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q <sub>he</sub>	6355 kWh	8154 kWh