

Summary of	LWV 82 Inverter	Reg. No.	041-K001-23	
Certificate Holder	:		-	
Name	ait-deutschland Gmb	Н		
Address	Industriestr. 3	Zip	95359	
City	Kasendorf	Country	Germany	
Certification Body	BRE Energy & Comm	BRE Energy & Communications Division		
Name of testing laboratory	WPZ	WPZ		
Subtype title	LWV 82 Inverter	LWV 82 Inverter		
Heat Pump Type	Outdoor Air/Water	Outdoor Air/Water		
Refrigerant	R410a	R410a		
Mass Of Refrigerant	3 kg	3 kg		
Certification Date	27.03.2019			

Model: LWCV 82R1/3

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	2.81 kW	3.28 kW
El input	0.56 kW	0.87 kW
СОР	5.02	2.85
Indoor water flow rate	0.36 m³/h	0.36 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	
Defrost test	passed	

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	48 dB(A)	48 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	180 %	135 %
Prated	6.70 kW	5.65 kW
SCOP	4.57	3.44
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.88 kW	5.04 kW
COP Tj = -7°C	3.26	2.31
Pdh Tj = +2°C	3.84 kW	3.48 kW
COP Tj = +2°C	4.70	3.43
Pdh Tj = +7°C	3.27 kW	3.04 kW
COP Tj = +7°C	5.97	4.86
Pdh Tj = 12°C	3.36 kW	3.39 kW
COP Tj = 12°C	7.92	6.56
Pdh Tj = Tbiv	5.88 kW	5.04 kW
COP Tj = Tbiv	3.26	2.31





Pdh Tj = TOL	5.11 kW	4.23 kW
COP Tj = TOL	3.18	2.12
Cdh	1.00	1.00
WTOL	60 °C	60 °C
Poff	31 W	31 W
РТО	o w	0 W
PSB	31 W	31 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.59 kW	1.42 kW
Annual energy consumption Qhe	3029 kWh	3390 kWh

Warmer Climate

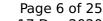
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	48 dB(A)	48 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	214 %	156 %
Prated	4.10 kW	5.50 kW





THIS IIIIOTHIALION WAS	generated by the HP KE	MARK database on 17 Dec 2020
SCOP	5.43	3.99
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	4.07 kW	5.55 kW
COP Tj = +2°C	4.15	2.69
Pdh Tj = +7°C	3.06 kW	3.86 kW
$COPTj = +7^{\circ}C$	5.65	3.70
Pdh Tj = 12°C	3.60 kW	3.50 kW
COP Tj = 12°C	8.43	5.60
Pdh Tj = Tbiv	4.20 kW	5.55 kW
COP Tj = Tbiv	4.28	2.69
Pdh Tj = TOL	4.20 kW	5.55 kW
COP Tj = TOL	4.28	2.69
Cdh	1.00	1.00
WTOL	60 °C	60 °C
Poff	31 W	31 W
РТО	0 W	0 W
PSB	31 W	31 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW





Annual anareu consumentian Obs	1000 144/16	1044 kWh
Annual energy consumption Qhe	1009 kWh	1844 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	48 dB(A)	48 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	145 %	127 %
Prated	6.50 kW	5.00 kW
SCOP	3.69	3.26
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	5.60 kW	6.25 kW
COP Tj = -7°C	3.17	2.69
Pdh Tj = +2°C	4.02 kW	3.33 kW
COP Tj = +2°C	5.27	4.14
Pdh Tj = +7°C	3.12 kW	3.48 kW
COP Tj = +7°C	6.04	5.25
Pdh Tj = 12°C	4.21 kW	3.70 kW





	<u> </u>	
COP Tj = 12°C	9.50	7.52
Pdh Tj = Tbiv	3.56 kW	4.03 kW
COP Tj = Tbiv	2.43	1.98
Pdh Tj = TOL	1.73 kW	5.58 kW
COP Tj = TOL	1.56	2.24
Cdh	1.00	1.00
WTOL	60 °C	60 °C
Poff	31 W	31 W
РТО	o w	0 W
PSB	31 W	31 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	4.77 kW	0.00 kW
Annual energy consumption Qhe	4339 kWh	3781 kWh



Model: LWV 82R1/3

General Data		
Power supply	1x230V 50Hz	

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	2.81 kW	3.28 kW	
El input	0.56 kW	0.87 kW	
СОР	5.02	2.85	
Indoor water flow rate	0.36 m³/h	0.36 m³/h	

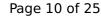
EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	48 dB(A)	48 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	180 %	135 %
Prated	6.70 kW	5.65 kW
SCOP	4.57	3.44
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.88 kW	5.04 kW
COP Tj = -7°C	3.26	2.31
Pdh Tj = +2°C	3.84 kW	3.48 kW
COP Tj = +2°C	4.70	3.43
Pdh Tj = +7°C	3.27 kW	3.04 kW
COP Tj = +7°C	5.97	4.86
Pdh Tj = 12°C	3.36 kW	3.39 kW
COP Tj = 12°C	7.92	6.56
Pdh Tj = Tbiv	5.88 kW	5.04 kW
COP Tj = Tbiv	3.26	2.31





Pdh Tj = TOL	5.11 kW	4.23 kW
COP Tj = TOL	3.18	2.12
Cdh	1.00	1.00
WTOL	60 °C	60 °C
Poff	31 W	31 W
РТО	o w	o w
PSB	31 W	31 W
PCK	o w	o w
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.59 kW	1.42 kW
Annual energy consumption Qhe	3029 kWh	3390 kWh

Warmer Climate

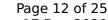
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	48 dB(A)	48 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	214 %	156 %
Prated	4.10 kW	5.50 kW





This information was generated by the HP RETMARK database on 17 Dec 2020			
SCOP	5.43	3.99	
Tbiv	2 °C	2 °C	
TOL	2 °C	2 °C	
Pdh Tj = +2°C	4.07 kW	5.55 kW	
COP Tj = +2°C	4.15	2.69	
Pdh Tj = +7°C	3.06 kW	3.86 kW	
$COPTj = +7^{\circ}C$	5.65	3.70	
Pdh Tj = 12°C	3.60 kW	3.50 kW	
COP Tj = 12°C	8.43	5.60	
Pdh Tj = Tbiv	4.20 kW	5.55 kW	
COP Tj = Tbiv	4.28	2.69	
Pdh Tj = TOL	4.20 kW	5.55 kW	
COP Tj = TOL	4.28	2.69	
Cdh	1.00	1.00	
WTOL	60 °C	60 °C	
Poff	31 W	31 W	
РТО	0 W	0 W	
PSB	31 W	31 W	
PCK	0 W	0 W	
Supplementary Heater: Type of energy input	electricity	electricity	
Supplementary Heater: PSUP	0.00 kW	0.00 kW	





Annual anareu consumentian Obs	1000 144/16	1044 kWh
Annual energy consumption Qhe	1009 kWh	1844 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	48 dB(A)	48 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	145 %	127 %
Prated	6.50 kW	5.00 kW
SCOP	3.69	3.26
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	5.60 kW	6.25 kW
COP Tj = -7°C	3.17	2.69
Pdh Tj = +2°C	4.02 kW	3.33 kW
COP Tj = +2°C	5.27	4.14
Pdh Tj = +7°C	3.12 kW	3.48 kW
COP Tj = +7°C	6.04	5.25
Pdh Tj = 12°C	4.21 kW	3.70 kW



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	<u> </u>	
COP Tj = 12°C	9.50	7.52
Pdh Tj = Tbiv	3.56 kW	4.03 kW
COP Tj = Tbiv	2.43	1.98
Pdh Tj = TOL	1.73 kW	5.58 kW
COP Tj = TOL	1.56	2.24
Cdh	1.00	1.00
WTOL	60 °C	60 °C
Poff	31 W	31 W
РТО	o w	0 W
PSB	31 W	31 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	4.77 kW	0.00 kW
Annual energy consumption Qhe	4339 kWh	3781 kWh



Model: LWAV 82R1/3

General Data		
Power supply 1x230V 50Hz		

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	2.81 kW	3.28 kW	
El input	0.56 kW	0.87 kW	
СОР	5.02	2.85	
Indoor water flow rate	0.36 m³/h	0.36 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	
Defrost test	passed	

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	48 dB(A)	48 dB(A)
Sound power level outdoor	50 dB(A)	50 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	180 %	135 %
Prated	6.70 kW	5.65 kW
SCOP	4.57	3.44
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.88 kW	5.04 kW
COP Tj = -7°C	3.26	2.31
Pdh Tj = +2°C	3.84 kW	3.48 kW
COP Tj = +2°C	4.70	3.43
Pdh Tj = +7°C	3.27 kW	3.04 kW
COP Tj = +7°C	5.97	4.86
Pdh Tj = 12°C	3.36 kW	3.39 kW
COP Tj = 12°C	7.92	6.56
Pdh Tj = Tbiv	5.88 kW	5.04 kW





COP Tj = Tbiv	3.26	2.31
Pdh Tj = TOL	5.11 kW	4.23 kW
COP Tj = TOL	3.18	2.12
Cdh	1.00	1.00
WTOL	60 °C	60 °C
Poff	31 W	31 W
РТО	o w	0 W
PSB	31 W	31 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.59 kW	1.42 kW
Annual energy consumption Qhe	3029 kWh	3390 kWh

Warmer Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	48 dB(A)	48 dB(A)	
Sound power level outdoor	50 dB(A)	50 dB(A)	

EN 14825		
	Low temperature	Medium temperature





This information was get	lerated by the Hr KLIM	ARK database on 17 Dec 2020
η_{s}	214 %	156 %
Prated	4.10 kW	5.50 kW
SCOP	5.43	3.99
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	4.07 kW	5.55 kW
COP Tj = +2°C	4.15	2.69
Pdh Tj = +7°C	3.06 kW	3.86 kW
COP Tj = +7°C	5.65	3.70
Pdh Tj = 12°C	3.60 kW	3.50 kW
COP Tj = 12°C	8.43	5.60
Pdh Tj = Tbiv	4.20 kW	5.55 kW
COP Tj = Tbiv	4.28	2.69
Pdh Tj = TOL	4.20 kW	5.55 kW
COP Tj = TOL	4.28	2.69
Cdh	1.00	1.00
WTOL	60 °C	60 °C
Poff	31 W	31 W
РТО	o w	o w
PSB	31 W	31 W
РСК	o w	0 W





Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1009 kWh	1844 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	48 dB(A)	48 dB(A)
Sound power level outdoor	50 dB(A)	50 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	145 %	127 %
Prated	6.50 kW	5.00 kW
SCOP	3.69	3.26
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	5.60 kW	6.25 kW
COP Tj = -7°C	3.17	2.69
Pdh Tj = +2°C	4.02 kW	3.33 kW
COP Tj = +2°C	5.27	4.14



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This information was generated by the HP KEYMARK database on 17 Dec 2020

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3.12 kW	3.48 kW
6.04	5.25
4.21 kW	3.70 kW
9.50	7.52
3.56 kW	4.03 kW
2.43	1.98
1.73 kW	5.58 kW
1.56	2.24
1.00	1.00
60 °C	60 °C
31 W	31 W
0 W	0 W
31 W	31 W
0 W	0 W
electricity	electricity
4.77 kW	0.00 kW
4339 kWh	3781 kWh
	3.12 kW 6.04 4.21 kW 9.50 3.56 kW 2.43 1.73 kW 1.56 1.00 60 °C 31 W 0 W 31 W 0 W electricity 4.77 kW



Model: LWAV+ 82R1/3

General Data	
Power supply 1x230V 50Hz	

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	2.81 kW	3.28 kW	
El input	0.56 kW	0.87 kW	
СОР	5.02	2.85	
Indoor water flow rate	0.36 m³/h	0.36 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
Defrost test	passed

Average Climate



 $$\operatorname{\textit{Page}}\xspace$ 21 of 25 This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	48 dB(A)	48 dB(A)
Sound power level outdoor	50 dB(A)	50 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	180 %	135 %
Prated	6.70 kW	5.65 kW
SCOP	4.57	3.44
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.88 kW	5.04 kW
COP Tj = -7°C	3.26	2.31
Pdh Tj = +2°C	3.84 kW	3.48 kW
COP Tj = +2°C	4.70	3.43
Pdh Tj = +7°C	3.27 kW	3.04 kW
COP Tj = +7°C	5.97	4.86
Pdh Tj = 12°C	3.36 kW	3.39 kW
COP Tj = 12°C	7.92	6.56
Pdh Tj = Tbiv	5.88 kW	5.04 kW





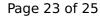
$$\operatorname{\textit{Page}}\xspace$ 22 of 25 This information was generated by the HP KEYMARK database on 17 Dec 2020

COP Tj = Tbiv	3.26	2.31
Pdh Tj = TOL	5.11 kW	4.23 kW
COP Tj = TOL	3.18	2.12
Cdh	1.00	1.00
WTOL	60 °C	60 °C
Poff	31 W	31 W
РТО	o w	o w
PSB	31 W	31 W
PCK	0 W	o w
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.59 kW	1.42 kW
Annual energy consumption Qhe	3029 kWh	3390 kWh

Warmer Climate

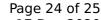
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	48 dB(A)	48 dB(A)
Sound power level outdoor	50 dB(A)	50 dB(A)

EN 14825		
	Low temperature	Medium temperature





This information was get	ierated by the Hi KETM	ARK database on 17 Dec 2020
η_{s}	214 %	156 %
Prated	4.10 kW	5.50 kW
SCOP	5.43	3.99
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	4.07 kW	5.55 kW
COP Tj = +2°C	4.15	2.69
Pdh Tj = +7°C	3.06 kW	3.86 kW
COP Tj = +7°C	5.65	3.70
Pdh Tj = 12°C	3.60 kW	3.50 kW
COP Tj = 12°C	8.43	5.60
Pdh Tj = Tbiv	4.20 kW	5.55 kW
COP Tj = Tbiv	4.28	2.69
Pdh Tj = TOL	4.20 kW	5.55 kW
COP Tj = TOL	4.28	2.69
Cdh	1.00	1.00
WTOL	60 °C	60 °C
Poff	31 W	31 W
РТО	o w	o w
PSB	31 W	31 W
РСК	o w	o w





Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1009 kWh	1844 kWh

Colder Climate

EN 12102-1				
	Low temperature	Medium temperature		
Sound power level indoor	48 dB(A)	48 dB(A)		
Sound power level outdoor	50 dB(A)	50 dB(A)		

EN 14825			
	Low temperature	Medium temperature	
η_{s}	145 %	127 %	
Prated	6.50 kW	5.00 kW	
SCOP	3.69	3.26	
Tbiv	-15 °C	-15 °C	
TOL	-22 °C	-22 °C	
Pdh Tj = -7°C	5.60 kW	6.25 kW	
COP Tj = -7°C	3.17	2.69	
Pdh Tj = +2°C	4.02 kW	3.33 kW	
COP Tj = +2°C	5.27	4.14	





This information was generated by the HP KEYMARK database on 17 Dec 202				
Pdh Tj = $+7^{\circ}$ C	3.12 kW	3.48 kW		
$COP Tj = +7^{\circ}C$	6.04	5.25		
Pdh Tj = 12°C	4.21 kW	3.70 kW		
COP Tj = 12°C	9.50	7.52		
Pdh Tj = Tbiv	3.56 kW	4.03 kW		
COP Tj = Tbiv	2.43	1.98		
Pdh Tj = TOL	1.73 kW	5.58 kW		
COP Tj = TOL	1.56	2.24		
Cdh	1.00	1.00		
WTOL	60 °C	60 °C		
Poff	31 W	31 W		
РТО	0 W	0 W		
PSB	31 W	31 W		
PCK	0 W	0 W		
Supplementary Heater: Type of energy input	electricity	electricity		
Supplementary Heater: PSUP	4.77 kW	0.00 kW		
Annual energy consumption Qhe	4339 kWh	3781 kWh		