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Login

Summary of	LWD 50A	Reg. No.	041-K001-20		
Certificate Holder	Certificate Holder				
Name	ait-deutschland GmbH	ait-deutschland GmbH			
Address	Industriestr. 3	Zip	95359		
City	Kasendorf	Country	Germany		
Certification Body	BRE Global Limited	BRE Global Limited			
Subtype title	LWD 50A	LWD 50A			
Heat Pump Type	Outdoor Air/Water				
Refrigerant	R290				
Mass of Refrigerant	0.95 kg				
Certification Date	12.05.2017				
Testing basis	HP Keymark Scheme Transition Rules				

Model: LWD 50A-HMD

Configure model		
Model name	LWD 50A-HMD	
Application	Heating (medium temp)	
Units	Outdoor	
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	
Defrost test	passed	

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	7.10 kW	6.57 kW	
El input	1.48 kW	1.95 kW	
СОР	4.80	3.37	

Warmer Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	57 dB(A)	57 dB(A)

	EN 14825	
	Low temperature	Medium temperature
η_{s}	198 %	160 %
Prated	7.28 kW	6.76 kW
SCOP	5.02	4.07
Tbiv	4 °C	4 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.60 kW	5.20 kW
COP Tj = +2°C	3.82	2.39
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	7.20 kW	6.70 kW
COP Tj = +7°C	5.02	3.75
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	7.90 kW	7.80 kW
COP Tj = 12°C	5.95	5.38
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	6.20 kW	5.80 kW





COP Tj = Tbiv 4.38 2.88 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh 5.60 kW 5.20 kW COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh 3.82 2.39 Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh 0.90 0.90 WTOL 62 °C 62 °C Poff 15 W 15 W PTO 15 W 15 W PCK 0 W 0 W Supplementary Heater: Type of energy input Electricity Electricity Supplementary Heater: PSUP 1.68 kW 1.56 kW Annual energy consumption Qhe 1937 kWh 2217 kWh			
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh 0.90 WTOL 62 °C 62 °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 1.68 kW 1.56 kW	COP Tj = Tbiv	4.38	2.88
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh WTOL 62 °C 62 °C 62 °C Poff 15 W 15 W 15 W PTO 15 W 15 W PSB 15 W 0 W 0 W Supplementary Heater: Type of energy input Electricity Electricity Supplementary Heater: PSUP 1.68 kW 1.56 kW	Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.60 kW	5.20 kW
WTOL 62 °C 62 °C Poff 15 W 15 W PTO 15 W 15 W PSB 15 W 0 W PCK 0 W Supplementary Heater: Type of energy input Electricity Electricity Supplementary Heater: PSUP 1.68 kW 1.56 kW	COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.82	2.39
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 1.68 kW 1.56 kW	Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.90	0.90
PTO 15 W 15 W PSB 15 W 0 W PCK 0 W 0 W Supplementary Heater: Type of energy input Electricity Electricity Supplementary Heater: PSUP 1.68 kW 1.56 kW	WTOL	62 °C	62 °C
PSB 15 W 15 W PCK 0 W 0 W Supplementary Heater: Type of energy input Electricity Electricity Supplementary Heater: PSUP 1.68 kW 1.56 kW	Poff	15 W	15 W
PCK 0 W 0 W Supplementary Heater: Type of energy input Electricity Electricity Supplementary Heater: PSUP 1.68 kW 1.56 kW	РТО	15 W	15 W
Supplementary Heater: Type of energy input Electricity Electricity Supplementary Heater: PSUP 1.68 kW 1.56 kW	PSB	15 W	15 W
Supplementary Heater: PSUP 1.68 kW 1.56 kW	PCK	o w	0 W
	Supplementary Heater: Type of energy input	Electricity	Electricity
Annual energy consumption Qhe 1937 kWh 2217 kWh	Supplementary Heater: PSUP	1.68 kW	1.56 kW
	Annual energy consumption Qhe	1937 kWh	2217 kWh

Colder Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level outdoor	57 dB(A)	57 dB(A)	

EN 14825		
	Low temperature	Medium temperature
η_{S}	147 %	112 %





Prated	5.56 kW	4.88 kW
SCOP	3.74	2.89
Tbiv	-12 °C	-12 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	4.80 kW	4.30 kW
$COP Tj = -7^{\circ}C$	3.59	2.46
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = $+2$ °C	5.70 kW	5.50 kW
$COPTj = +2^{\circ}C$	4.48	3.61
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = $+7^{\circ}$ C	7.30 kW	7.20 kW
$COP Tj = +7^{\circ}C$	5.48	5.11
Cdh Tj = $+7$ °C	0.99	0.99
Pdh Tj = 12°C	8.00 kW	8.00 kW
COP Tj = 12°C	6.10	6.31
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	4.10 kW	3.60 kW
COP Tj = Tbiv	3.11	2.00
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.00 kW	2.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.25	1.39
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.90	0.90





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WTOL	62 °C	62 °C
Poff	15 W	15 W
РТО	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	5.56 kW	4.88 kW
Annual energy consumption Qhe	3661 kWh	4169 kWh
Pdh Tj = -15°C (if TOL<-20°C)	3.70	3.20
COP Tj = -15°C (if TOL $<$ -20°C)	2.78	1.76
Cdh Tj = -15 °C	1.00	1.00

Average Climate

EN 12102-1			
Low temperature Medium temperature			
Sound power level outdoor	57 dB(A)	57 dB(A)	

EN 14825		
	Low temperature	Medium temperature
η_{s}	164 %	125 %
Prated	6.02 kW	5.41 kW





SCOP	4.16	3.20
Tbiv	-5 °C	-5 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.70 kW	4.00 kW
COP Tj = -7°C	3.27	1.99
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	5.60 kW	5.40 kW
COP Tj = +2°C	4.20	3.18
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = $+7^{\circ}$ C	7.20 kW	7.10 kW
$COP Tj = +7^{\circ}C$	5.29	4.65
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	8.00 kW	7.90 kW
COP Tj = 12°C	6.14	5.97
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	4.90 kW	4.30 kW
COP Tj = Tbiv	3.51	2.24
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.20 kW	3.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.96	1.74
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL $<$ Tdesignh	0.90	0.90
WTOL	62 °C	62 °C



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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	1.82 kW	1.81 kW
Annual energy consumption Qhe	2989 kWh	3491 kWh



Model: LWD 50A-HTD

Configure model		
Model name	LWD 50A-HTD	
Application	Heating (medium temp)	
Units	Outdoor	
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	
Defrost test	passed	

EN 14511-2				
Low temperature Medium temperature				
Heat output	7.10 kW	6.57 kW		
El input	1.48 kW	1.95 kW		
СОР	4.80	3.37		

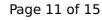
Warmer Climate





EN 12102-1			
Low temperature Medium temperature			
Sound power level outdoor	57 dB(A)	57 dB(A)	

	EN 14825	
	Low temperature	Medium temperature
η_{s}	198 %	160 %
Prated	7.28 kW	6.76 kW
SCOP	5.02	4.07
Tbiv	4 °C	4 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.60 kW	5.20 kW
COP Tj = +2°C	3.82	2.39
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	7.20 kW	6.70 kW
COP Tj = +7°C	5.02	3.75
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	7.90 kW	7.80 kW
COP Tj = 12°C	5.95	5.38
Cdh Tj = +12 °C	0.99	0.99
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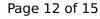


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WTOL 62 °C 62 °C Poff 15 W 15 W PTO 15 W 15 W PSB 15 W 0 W PCK 0 W Supplementary Heater: Type of energy input Electricity Electricity Supplementary Heater: PSUP 1.68 kW 1.56 kW	COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.82	2.39
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PCK 0 W 0 W Supplementary Heater: Type of energy input Electricity Electricity Supplementary Heater: PSUP 1.68 kW 1.56 kW	РТО	15 W	15 W
Supplementary Heater: Type of energy input Electricity Electricity Supplementary Heater: PSUP 1.68 kW 1.56 kW	PSB	15 W	15 W
Supplementary Heater: PSUP 1.68 kW 1.56 kW	PCK	o w	0 W
	Supplementary Heater: Type of energy input	Electricity	Electricity
Annual energy consumption Qhe 1937 kWh 2217 kWh	Supplementary Heater: PSUP	1.68 kW	1.56 kW
	Annual energy consumption Qhe	1937 kWh	2217 kWh

Colder Climate

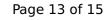
EN 12102-1			
Low temperature Medium temperature			
Sound power level outdoor	57 dB(A)	57 dB(A)	

EN 14825		
	Low temperature	Medium temperature
η_{s}	147 %	112 %
	-	





This information was gener	aced by the Hi KETMA	NK database on 21 juli 2022
Prated	5.56 kW	4.88 kW
SCOP	3.74	2.89
Tbiv	-12 °C	-12 °C
TOL	-20 °C	-20 °C
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Pdh Tj = Tbiv	4.10 kW	3.60 kW
COP Tj = Tbiv	3.11	2.00
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.00 kW	2.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.25	1.39
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.90	0.90
	-	





WTOL	62 °C	62 °C
Poff	15 W	15 W
РТО	15 W	15 W
PSB	15 W	15 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.56 kW	4.88 kW
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Cdh Tj = -15 °C	1.00	1.00

Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	57 dB(A)	57 dB(A)

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Low temperature	Medium temperature		
164 %	125 %		
6.02 kW	5.41 kW		
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Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	7.20 kW	7.10 kW
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Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	8.00 kW	7.90 kW
COP Tj = 12°C	6.14	5.97
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	4.90 kW	4.30 kW
COP Tj = Tbiv	3.51	2.24
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.20 kW	3.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.96	1.74
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.90	0.90
WTOL	62 °C	62 °C



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Poff	15 W	15 W
РТО	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	1.82 kW	1.81 kW
Annual energy consumption Qhe	2989 kWh	3491 kWh