

Page 1 of 15

## This information was generated by the HP KEYMARK database on 22 Jun 2022

#### **Login**

Summary of	LWD 50A/SX	Reg. No.	041-K001-43	
Certificate Holder				
Name	ait-deutschland GmbH	ait-deutschland GmbH		
Address	Industriestr. 3	Zip	95359	
City	Kasendorf	Country	Germany	
Certification Body	BRE Global Limited			
Subtype title	LWD 50A/SX			
Heat Pump Type	Outdoor Air/Water			
Refrigerant	R290			
Mass of Refrigerant	0.95 kg			
Certification Date	24.11.2020			
Testing basis	HP Keymark Scheme Rules Rev 08			



# **Model: LWD 50A/SX-HMD**

Configure model		
Model name	LWD 50A/SX-HMD	
Application	Heating (medium temp)	
Units	Outdoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	No	
Cooling mode application (optional)	n/a	

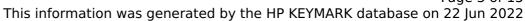
General Data		
Power supply	1x230V 50Hz	

# Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	6.85 kW	6.04 kW	
El input	1.53 kW	2.01 kW	
СОР	4.46	3.00	

EN 14511-4		
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	
Starting and operating test	passed	

## Warmer Climate





EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	58 dB(A)	58 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	189 %	155 %
Prated	7.07 kW	6.54 kW
SCOP	4.79	3.95
Tbiv	4 °C	4 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.47 kW	5.16 kW
COP Tj = +2°C	3.70	2.62
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	6.94 kW	6.40 kW
COP Tj = +7°C	4.69	3.56
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	7.51 kW	7.41 kW
COP Tj = 12°C	5.53	5.01
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	6.06 kW	5.60 kW
	·	

EHPA Secretariat | Rue dArlon 63-67 | Phone: +32 2 400 10 17 | Email: secretariat@heatpumpkeymark.com | www.heatpumpkeymark.com





COP Tj = Tbiv	4.15	2.95
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.47 kW	5.16 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.70	2.62
WTOL	62 °C	62 °C
Poff	10 W	10 W
РТО	10 W	10 W
PSB	10 W	10 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.60 kW	1.38 kW
Annual energy consumption Qhe	1971 kWh	2211 kWh

## Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	58 dB(A)	58 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	135 %	114 %
Prated	5.43 kW	4.98 kW
Tracea	3.43 KW	7.50 KW





SCOP	3.44	2.93
Tbiv	-12 °C	-12 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	4.64 kW	4.31 kW
COP Tj = -7°C	3.19	2.58
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	5.55 kW	5.44 kW
COP Tj = +2°C	4.07	3.51
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	7.08 kW	6.97 kW
$COP Tj = +7^{\circ}C$	4.93	4.63
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	7.54 kW	7.56 kW
COP Tj = 12°C	5.29	5.39
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	4.00 kW	3.67 kW
COP Tj = Tbiv	2.84	2.19
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	2.94 kW	2.72 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.18	1.61
WTOL	62 °C	62 °C
Poff	10 W	10 W





		· · · · · · · · · · · · · · · · · · ·
PTO	10 W	10 W
PSB	10 W	10 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.43 kW	4.98 kW
Annual energy consumption Qhe	3888 kWh	4185 kWh
Pdh Tj = -15°C (if TOL<-20°C)	3.61	3.30
COP Tj = -15°C (if TOL $<$ -20°C)	2.60	1.97
Cdh Tj = -15 °C	1.00	1.00

# Average Climate

EN 12102-1			
Low temperature Medium temperature			
Sound power level outdoor	58 dB(A)	58 dB(A)	

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	152 %	127 %
Prated	6.37 kW	5.91 kW
SCOP	3.88	3.25
Tbiv	-4 °C	-4 °C





This information was gener	decaby the Hi KETIII	ANN database on 22 jun 202
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.57 kW	4.11 kW
COP Tj = -7°C	3.04	2.28
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	5.52 kW	5.36 kW
COP Tj = +2°C	3.94	3.23
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = $+7^{\circ}$ C	7.03 kW	6.81 kW
$COPTj = +7^{\circ}C$	4.87	4.32
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	7.54 kW	7.51 kW
COP Tj = 12°C	5.54	5.36
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	4.90 kW	4.55 kW
COP Tj = Tbiv	3.35	2.57
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.18 kW	3.72 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.81	2.05
WTOL	62 °C	1 °C
Poff	10 W	10 W
РТО	10 W	10 W
PSB	10 W	10 W



## Page 8 of 15

PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.19 kW	2.19 kW
Annual energy consumption Qhe	3388 kWh	3762 kWh

# Model: LWD 50A/SX-HTD S

Configure model		
Model name	LWD 50A/SX-HTD S	
Application	Heating (medium temp)	
Units	Outdoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	No	
Cooling mode application (optional)	n/a	

General Data		
Power supply	1x230V 50Hz	

# Heating

EN 14511-2				
Low temperature Medium temperature				
Heat output	6.85 kW	6.04 kW		
El input	1.53 kW	2.01 kW		
СОР	4.46	3.00		

EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

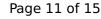
## Warmer Climate



EN 12102-1			
Low temperature Medium temperature			
Sound power level outdoor	58 dB(A)	58 dB(A)	

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	189 %	155 %
Prated	7.07 kW	6.54 kW
SCOP	4.79	3.95
Tbiv	4 °C	4 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.47 kW	5.16 kW
COP Tj = +2°C	3.70	2.62
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	6.94 kW	6.40 kW
COP Tj = +7°C	4.69	3.56
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	7.51 kW	7.41 kW
COP Tj = 12°C	5.53	5.01
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	6.06 kW	5.60 kW
	·	

EHPA Secretariat | Rue dArlon 63-67 | Phone: +32 2 400 10 17 | Email: secretariat@heatpumpkeymark.com | www.heatpumpkeymark.com



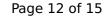


COP Tj = Tbiv	4.15	2.95
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.47 kW	5.16 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.70	2.62
WTOL	62 °C	62 °C
Poff	10 W	10 W
РТО	10 W	10 W
PSB	10 W	10 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.60 kW	1.38 kW
Annual energy consumption Qhe	1971 kWh	2211 kWh

## Colder Climate

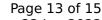
EN 12102-1			
Low temperature Medium temperature			
Sound power level outdoor	58 dB(A)	58 dB(A)	

EN 14825		
	Low temperature	Medium temperature
$\eta_s$	135 %	114 %
Prated	5.43 kW	4.98 kW
Traced	3.43 KW	7.50 KW





SCOP	3.44	ARK database on 22 Jun 202 2.93
Tbiv	-12 °C	-12 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	4.64 kW	4.31 kW
$COPTj = -7^{\circ}C$	3.19	2.58
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = $+2$ °C	5.55 kW	5.44 kW
$COPTj = +2^{\circ}C$	4.07	3.51
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = $+7^{\circ}$ C	7.08 kW	6.97 kW
$COPTj = +7^{\circ}C$	4.93	4.63
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	7.54 kW	7.56 kW
COP Tj = 12°C	5.29	5.39
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	4.00 kW	3.67 kW
COP Tj = Tbiv	2.84	2.19
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	2.94 kW	2.72 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.18	1.61
WTOL	62 °C	62 °C
Poff	10 W	10 W



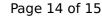


РТО	10 W	10 W
PSB	10 W	10 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.43 kW	4.98 kW
Annual energy consumption Qhe	3888 kWh	4185 kWh
Pdh Tj = -15°C (if TOL<-20°C)	3.61	3.30
COP Tj = -15°C (if TOL $<$ -20°C)	2.60	1.97
Cdh Tj = -15 °C	1.00	1.00

# Average Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level outdoor	58 dB(A)	58 dB(A)	

Low temperature	Medium temperature
152 %	127 %
6.37 kW	5.91 kW
3.88	3.25
-4 °C	-4 °C
	152 % 6.37 kW 3.88





TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.57 kW	4.11 kW
COP Tj = -7°C	3.04	2.28
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	5.52 kW	5.36 kW
COP Tj = +2°C	3.94	3.23
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	7.03 kW	6.81 kW
COP Tj = +7°C	4.87	4.32
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	7.54 kW	7.51 kW
COP Tj = 12°C	5.54	5.36
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	4.90 kW	4.55 kW
COP Tj = Tbiv	3.35	2.57
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.18 kW	3.72 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.81	2.05
WTOL	62 °C	1 °C
Poff	10 W	10 W
РТО	10 W	10 W
PSB	10 W	10 W



## Page 15 of 15

PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.19 kW	2.19 kW
Annual energy consumption Qhe	3388 kWh	3762 kWh