Subtype LWD 70A/RX

Certificate Holder	ait-deutschland GmbH
Address	Industriestr. 3
ZIP	95359
City	Kasendorf
Country	DE
Certification Body	BRE Global Limited
Subtype title	LWD 70A/RX
Registration number	041-K001-46
Heat Pump Type	Outdoor Air/Water
Refrigerant	R290
Mass of Refrigerant	2.2 kg
Certification Date	24.11.2020
Testing basis	HP Keymark Scheme Rules Rev 08

Model LWD 70A/RX-HMD

Model name	LWD 70A/RX-HMD
Application	Heating (medium temp)
Units	Outdoor
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

Outdoor Air/Water

EN 14511-4 | Heating

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

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	57 dB(A)	57 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
ηs	152 %	125 %
Prated	8.61 kW	7.92 kW
SCOP	3.87	3.20
Tbiv	-4 °C	-4 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	6.18 kW	5.58 kW
COP Tj = -7°C	3.18	2.28
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	7.46 kW	7.12 kW
COP Tj = +2°C	3.94	3.18
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	8.69 kW	8.75 kW
COP Tj = +7°C	4.66	4.18
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	10.34 kW	10.32 kW
COP Tj = 12°C	5.58	5.43
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	6.62 kW	6.09 kW
COP Tj = Tbiv	3.47	2.56

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.60 kW	5.05 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.90	2.04
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	3.01 kW	2.87 kW
Annual energy consumption Qhe	4595 kWh	5117 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level outdoor	57 dB(A)	57 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	136 %	114 %
Prated	7.21 kW	6.70 kW
SCOP	3.47	2.92
Tbiv	-12 °C	-12 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	6.28 kW	5.85 kW
COP Tj = -7°C	3.36	2.62
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	7.52 kW	7.28 kW
COP Tj = +2°C	4.06	3.48
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	8.68 kW	8.71 kW
COP Tj = +7°C	4.69	4.41
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	10.33 kW	10.37 kW
COP Tj = 12°C	5.28	5.43
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	5.31 kW	4.94 kW
COP Tj = Tbiv	2.93	2.20
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.73 kW	3.63 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.63	1.60
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	7.21 kW	6.70 kW
Annual energy consumption Qhe	5124 kWh	5657 kWh
Pdh Tj = -15°C (if TOL	4.73	4.43
COP Tj = -15°C (if TOL	2.63	1.96
Cdh Tj = -15 °C	1.00	1.00

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	57 dB(A)	57 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	185 %	156 %
Prated	9.25 kW	8.92 kW
SCOP	4.71	3.98
Tbiv	4 °C	4 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.35 kW	6.68 kW
COP Tj = +2°C	3.68	2.52
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	8.71 kW	8.85 kW
COP Tj = +7°C	4.50	3.59
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	10.31 kW	10.22 kW
COP Tj = 12°C	5.58	5.10
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	7.93 kW	7.64 kW
COP Tj = Tbiv	4.06	2.95
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.35 kW	6.68 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.68	2.95
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	1.90 kW	2.24 kW
Annual energy consumption Qhe	2626 kWh	2998 kWh

Model LWD 70A/RX-HTD	
Model name	LWD 70A/RX-HTD
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data	
Power supply	3x400V 50Hz
Off-peak product	n/a

Outdoor Air/Water EN 14511-4 | Heating	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

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

EN 14825 | Average Climate	Low temperature	Medium temperature
ηs	152 %	125 %
Prated	8.61 kW	7.92 kW
SCOP	3.87	3.20
Tbiv	-4 °C	-4 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	6.18 kW	5.58 kW
COP Tj = -7°C	3.18	2.28
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	7.46 kW	7.12 kW
COP Tj = +2°C	3.94	3.18
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	8.69 kW	8.75 kW
COP Tj = +7°C	4.66	4.18
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	10.34 kW	10.32 kW
COP Tj = 12°C	5.58	5.43
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	6.62 kW	6.09 kW
COP Tj = Tbiv	3.47	2.56

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.60 kW	5.05 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.90	2.04
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	3.01 kW	2.87 kW
Annual energy consumption Qhe	4595 kWh	5117 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level outdoor	57 dB(A)	57 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	136 %	114 %
Prated	7.21 kW	6.70 kW
SCOP	3.47	2.92
Tbiv	-12 °C	-12 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	6.28 kW	5.85 kW
COP Tj = -7°C	3.36	2.62
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	7.52 kW	7.28 kW
COP Tj = +2°C	4.06	3.48
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	8.68 kW	8.71 kW
COP Tj = +7°C	4.69	4.41
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	10.33 kW	10.37 kW
COP Tj = 12°C	5.28	5.43
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	5.31 kW	4.94 kW
COP Tj = Tbiv	2.93	2.20
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.73 kW	3.63 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.63	1.60
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	7.21 kW	6.70 kW
Annual energy consumption Qhe	5124 kWh	5657 kWh
Pdh Tj = -15°C (if TOL	4.73	4.43
COP Tj = -15°C (if TOL	2.63	1.96
Cdh Tj = -15 °C	1.00	1.00

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	57 dB(A)	57 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	185 %	156 %
Prated	9.25 kW	8.92 kW
SCOP	4.71	3.98
Tbiv	4 °C	4 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.35 kW	6.68 kW
COP Tj = +2°C	3.68	2.52
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	8.71 kW	8.85 kW
COP Tj = +7°C	4.50	3.59
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	10.31 kW	10.22 kW
COP Tj = 12°C	5.58	5.10
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	7.93 kW	7.64 kW
COP Tj = Tbiv	4.06	2.95
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.35 kW	6.68 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.68	2.95
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	1.90 kW	2.24 kW
Annual energy consumption Qhe	2626 kWh	2998 kWh