Subtype Air to Water Heat Pump- R290- 12kW

Certificate Holder	Aira Group AB
Address	Norra Stationsgatan 93C
ZIP	11364
City	Stockholm
Country	SE
Certification Body	BRE Global Limited
Subtype title	Air to Water Heat Pump- R290- 12kW
Registration number	041-K087-08
Heat Pump Type	Outdoor Air/Water
Refrigerant	R290
Mass of Refrigerant	1.5 kg
Certification Date	21.08.2024
Testing basis	Heat Pump Keymark Scheme Rules Rev 13
Testing laboratory	TÜV SÜD Certification and Testing Co., Ltd. Guangzhou Branch, CN

Model HPO-AW-12-400V-1.0	
Model name	HPO-AW-12-400V-1.0
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	n/a
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 14511-2 | Heating		
	Low temperature	Medium temperature
Heat output	9.97 kW	12.80 kW
El input	2.23 kW	4.42 kW
COP	4.48	2.90

EN 12102-1 | Average Climate		
	Low temperature	Medium temperature
Sound power level outdoor	57 dB(A)	60 dB(A)

EN 14825 | Average Climate		
	Low temperature	Medium temperature
ηs	185 %	136 %
Prated	12.61 kW	11.68 kW
SCOP	4.70	3.48
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.16 kW	10.33 kW
COP Tj = -7°C	2.96	2.23
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	7.32 kW	6.29 kW
COP Tj = +2°C	4.58	3.36
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	5.88 kW	5.52 kW

COP Tj = +7°C	6.66	4.94
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	6.84 kW	6.61 kW
COP Tj = 12°C	8.56	6.38
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	11.16 kW	10.33 kW
COP Tj = Tbiv	2.96	2.23
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.38 kW	9.42 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.73	2.03
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	70 °C	70 °C
Poff	22 W	22 W
PTO	56 W	60 W
PSB	22 W	22 W
PCK	60 W	60 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.23 kW	2.26 kW
Annual energy consumption Qhe	5543 kWh	6923 kWh

Model HPO-AW-12-230V-1.0	
Model name	HPO-AW-12-230V-1.0
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	n/a
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data	
Power supply	1x230V 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 14511-2 | Heating		
	Low temperature	Medium temperature
Heat output	10.33 kW	12.55 kW
El input	2.14 kW	4.22 kW
COP	4.83	2.98

EN 12102-1 | Average Climate		
	Low temperature	Medium temperature
Sound power level outdoor	59 dB(A)	59 dB(A)

EN 14825 | Average Climate		
	Low temperature	Medium temperature
ηs	186 %	136 %
Prated	12.69 kW	11.79 kW
SCOP	4.72	3.47
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.23 kW	10.43 kW
COP Tj = -7°C	2.96	2.21
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	7.43 kW	6.37 kW
COP Tj = +2°C	4.59	3.38
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	6.10 kW	5.87 kW

COP Tj = +7°C	6.77	4.87
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	6.89 kW	6.97 kW
COP Tj = 12°C	8.48	6.42
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	11.23 kW	10.43 kW
COP Tj = Tbiv	2.96	2.21
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.34 kW	9.55 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.75	2.06
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	70 °C	70 °C
Poff	24 W	24 W
PTO	57 W	57 W
PSB	24 W	24 W
PCK	50 W	50 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.35 kW	2.25 kW
Annual energy consumption Qhe	5556 kWh	7013 kWh