This information was generated by the HP KEYMARK database on 9 Oct 2023

Summary of	Air Source Heat Pump R290-12	Reg. No.	041-K070-02
Certificate Holder			
Name	P.P.U.H “HEGAM”		
Address	ul. Mokra 1	ZIP	42-287
City	Kamienica	Country	Poland
Certification Body	BRE Global Limited		
Subtype title	Air Source Heat Pump R290-12		
Heat Pump Type	Outdoor Air/Water		
Refrigerant	R290		
Mass of Refrigerant	1.05 kg		
Certification Date	09.10.2023		
Testing basis	Heat Pump Keymark Scheme Rules Rev 12		

Model: HPC-12P1

Configure model	
Model name	HPC-12P1
Application	Heating (medium temp)
Units	Outdoor
Climate Zone	n/a
Reversibility	Yes
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	12.38 kW	12.40 kW
El input	2.66 kW	4.18 kW
COP	4.66	2.97

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

Average Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level outdoor	67 dB(A)	68 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	188 %	148 %
Prated	9.90 kW	10.22 kW
SCOP	4.77	3.77
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.76 kW	9.04 kW
COP Tj = -7°C	3.15	2.28
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	5.50 kW	5.51 kW
COP Tj = +2°C	4.57	3.64
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.75 kW	3.57 kW
COP Tj = +7°C	6.20	5.11
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.27 kW	4.09 kW

COP Tj = 12°C	9.06	7.09
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	8.76 kW	9.04 kW
COP Tj = Tbiv	3.15	2.28
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.94 kW	9.99 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.74	2.05
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	64 °C	64 °C
Poff	13 W	13 W
PTO	38 W	38 W
PSB	13 W	13 W
PCK	83 W	83 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.23 kW
Annual energy consumption Qhe	4286 kWh	5608 kWh

Model: HPC-12P3

Configure model	
Model name	HPC-12P3
Application	Heating (medium temp)
Units	Outdoor
Climate Zone	n/a
Reversibility	Yes
Cooling mode application (optional)	n/a

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	12.09 kW	12.49 kW
El input	2.67 kW	4.26 kW
COP	4.53	2.93

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

Average Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level outdoor	67 dB(A)	68 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	187 %	145 %
Prated	9.88 kW	9.93 kW
SCOP	4.74	3.70
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.74 kW	8.79 kW
COP Tj = -7°C	3.18	2.35
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	5.54 kW	5.38 kW
COP Tj = +2°C	4.60	3.61
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.50 kW	3.45 kW
COP Tj = +7°C	6.10	4.83
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.10 kW	3.94 kW

COP Tj = 12°C	8.18	6.57
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	8.74 kW	8.79 kW
COP Tj = Tbiv	3.18	2.35
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.83 kW	9.92 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.70	2.03
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	13 W	13 W
PTO	38 W	38 W
PSB	13 W	13 W
PCK	83 W	83 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.05 kW	0.01 kW
Annual energy consumption Qhe	4300 kWh	5547 kWh