

Subtype Intelligent Inverter Heat Pump 60-R290

Certificate Holder	Ecoer Inc.
Address	43671 Trade Center Place, Suite 100 Dulles
ZIP	20166
City	Virginia
Country	US
Certification Body	BRE Global Limited
Subtype title	Intelligent Inverter Heat Pump 60-R290
Registration number	041-K063-03
Heat Pump Type	Outdoor Air/Water
Refrigerant	R290
Mass of Refrigerant	1.3 kg
Certification Date	14.08.2023
Testing basis	Heat Pump Keymark Scheme Rules Rev 12

Model ESBM-060GPP

Model name	ESBM-060GPP
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 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	64 dB(A)	64 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	183 %	145 %
Prated	12.57 kW	11.81 kW
SCOP	4.65	3.71
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.12 kW	10.45 kW
COP Tj = -7°C	3.31	2.31
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	6.82 kW	6.39 kW
COP Tj = +2°C	4.51	3.64
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	7.60 kW	7.44 kW
COP Tj = +7°C	5.60	4.68
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	7.71 kW	7.56 kW
COP Tj = 12°C	6.89	6.18
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	11.12 kW	10.45 kW
COP Tj = Tbiv	3.31	2.31

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.54 kW	12.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.85	1.96
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.990
WTOL	75 °C	75 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	58 W	58 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.03 kW	0.00 kW
Annual energy consumption Qhe	5587 kWh	6587 kWh

Model ESCM-060GPP

Model name	ESCM-060GPP
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 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	62 dB(A)	61 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	193 %	145 %
Prated	12.55 kW	12.34 kW
SCOP	4.91	3.70
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.11 kW	10.92 kW
COP Tj = -7°C	3.23	2.34
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	6.89 kW	6.80 kW
COP Tj = +2°C	4.83	3.58
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	7.30 kW	7.36 kW
COP Tj = +7°C	6.04	4.74
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	7.78 kW	7.39 kW
COP Tj = 12°C	7.46	6.12
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	11.11 kW	10.92 kW
COP Tj = Tbiv	3.23	2.34

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.61 kW	12.33 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.89	2.06
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.990
WTOL	63 °C	63 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	17 W	17 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.01 kW
Annual energy consumption Qhe	5281 kWh	6895 kWh