

## Subtype Intelligent Inverter Heat Pump R290- U15+U20

Certificate Holder	Guangdong PHNIX Eco-Energy Solution Ltd.
Address	No. 3 Tianyuan Road Dagang Town
ZIP	511470
City	Guangdong
Country	CN
Certification Body	BRE Global Limited
Subtype title	Intelligent Inverter Heat Pump R290- U15+U20
Registration number	041-K020-14
Heat Pump Type	Outdoor Air/Water
Refrigerant	R290
Mass of Refrigerant	0.75 kg
Certification Date	15.03.2024
Testing basis	Heat Pump Keymark Scheme Rules Rev 13
Testing laboratory	TÜV SÜD Certification and Testing Co., Ltd. Guangzhou Branch, CN

## Model U15

Model name	U15
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	4.00 kW	4.42 kW
El input	0.82 kW	1.53 kW
COP	4.90	2.89

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	55 dB(A)	57 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	195 %	141 %
Prated	4.48 kW	4.75 kW
SCOP	4.96	3.59
Tbiv	-7 °C	-7 °C
TOL	-25 °C	-25 °C
Pdh Tj = -7°C	3.96 kW	4.20 kW
COP Tj = -7°C	3.14	2.22
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	2.63 kW	2.63 kW
COP Tj = +2°C	4.91	3.52
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	1.96 kW	1.79 kW

COP Tj = +7°C	6.63	4.77
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	2.33 kW	2.04 kW
COP Tj = 12°C	8.81	6.26
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	3.96 kW	4.20 kW
COP Tj = Tbiv	3.14	2.22
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.24 kW	4.48 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.81	2.06
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	75 °C	75 °C
Poff	10 W	10 W
PTO	11 W	11 W
PSB	10 W	10 W
PCK	42 W	42 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.23 kW	0.28 kW
Annual energy consumption Qhe	1864 kWh	2735 kWh

## Model U20

Model name	U20
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	6.10 kW	5.47 kW
El input	1.26 kW	1.84 kW
COP	4.83	2.98

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	56 dB(A)	58 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	192 %	135 %
Prated	5.63 kW	5.58 kW
SCOP	4.87	3.46
Tbiv	-7 °C	-7 °C
TOL	-25 °C	-25 °C
Pdh Tj = -7°C	4.98 kW	4.93 kW
COP Tj = -7°C	3.14	2.20
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	3.06 kW	3.03 kW
COP Tj = +2°C	4.60	3.35
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	2.07 kW	1.99 kW

COP Tj = +7°C	6.74	4.54
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	2.49 kW	2.18 kW
COP Tj = 12°C	8.96	6.35
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	4.98 kW	4.93 kW
COP Tj = Tbiv	3.14	2.20
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.49 kW	5.13 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.80	1.93
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	75 °C	75 °C
Poff	11 W	11 W
PTO	12 W	12 W
PSB	11 W	11 W
PCK	44 W	44 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.14 kW	0.44 kW
Annual energy consumption Qhe	2387 kWh	3333 kWh