

Subtype DC Inverter Air to Water Heat Pump Unit- R290- 08- C

Certificate Holder	Zhongshan Amitime Electric Co., Ltd
Address	5th Yandong Rd
ZIP	
City	Zhongshan City - Guangdong
Country	CN
Certification Body	BRE Global Limited
Subtype title	DC Inverter Air to Water Heat Pump Unit- R290- 08- C
Registration number	041-K027-14
Heat Pump Type	Outdoor Air/Water
Refrigerant	R290
Mass of Refrigerant	0.7 kg
Certification Date	22.09.2023
Testing basis	Heat Pump Keymark Scheme Rules Rev 12
Testing laboratory	TÜV SÜD Certification and Testing Co., Ltd. Guangzhou Branch, CN

Model Indoor unit: PAVH-06-20V1GX-250L/IX, Outdoor unit: PAVH-08V1GXX

Model name	Indoor unit: PAVH-06-20V1GX-250L/IX, Outdoor unit: PAVH-08V1GXX
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

#### General data

Power supply	1x230V 50Hz
Off-peak product	No

#### Outdoor Air/Water

##### EN 16147 | Operating test

Temperature operating range	2
Safety devices checking test	2
Condensate draining	2

##### EN 12102-2 | Average Climate

Sound power level indoor	33 dB(A)
Sound power level outdoor	56 dB(A)

##### EN 16147 | Average Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	130 %
COP	3.12
Heating up time	43:17:50 h:min
Standby power input	26.0 W
Reference hot water temperature	45.2 °C
Mixed water at 40°C	222 l

##### 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	5.77 kW	5.57 kW
El input	1.14 kW	1.65 kW

COP	5.07	3.37
-----	------	------

**EN 12102-1 | Average Climate**

	Low temperature	Medium temperature
Sound power level indoor	33 dB(A)	33 dB(A)
Sound power level outdoor	54 dB(A)	56 dB(A)

**EN 14825 | Average Climate**

	Low temperature	Medium temperature
$\eta_s$	191 %	143 %
P <sub>rated</sub>	6.93 kW	6.40 kW
SCOP	4.85	3.65
T <sub>biv</sub>	-7 °C	-7 °C
TOL	-25 °C	-25 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	6.13 kW	5.67 kW
COP T <sub>j</sub> = -7°C	3.09	2.29
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +2°C	3.83 kW	3.59 kW
COP T <sub>j</sub> = +2°C	4.67	3.64
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = +7°C	3.29 kW	3.02 kW
COP T <sub>j</sub> = +7°C	6.81	4.99
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = 12°C	3.89 kW	3.62 kW
COP T <sub>j</sub> = 12°C	9.50	6.28
C <sub>dh</sub> T <sub>j</sub> = +12 °C	0.900	0.900
P <sub>dh</sub> T <sub>j</sub> = T <sub>biv</sub>	6.13 kW	5.67 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.09	2.29
P <sub>dh</sub> T <sub>j</sub> = TOL or P <sub>dh</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	5.64 kW	5.09 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	2.98	2.10
C <sub>dh</sub> T <sub>j</sub> = TOL or P <sub>dh</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	0.900	0.900
WTOL	56 °C	56 °C
P <sub>off</sub>	20 W	20 W
PTO	23 W	23 W
PSB	20 W	20 W
PCK	30 W	30 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.29 kW	1.32 kW
Annual energy consumption Q <sub>he</sub>	2953 kWh	3622 kWh

**Model Indoor unit: ecoSTAR All-in-one, Outdoor unit: ecoSTAR08**

Model name	Indoor unit: ecoSTAR All-in-one, Outdoor unit: ecoSTAR08
Application	Heating + DHW + low temp
Units	Indoor, 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 16147 | Operating test**

Temperature operating range	2
Safety devices checking test	2
Condensate draining	2

**EN 12102-2 | Average Climate**

Sound power level indoor	33 dB(A)
Sound power level outdoor	56 dB(A)

**EN 16147 | Average Climate**

Declared load profile	L
Efficiency ηDHW	130 %
COP	3.12
Heating up time	43:17:50 h:min
Standby power input	26.0 W
Reference hot water temperature	45.2 °C
Mixed water at 40°C	222 l

**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	5.77 kW	5.57 kW
El input	1.14 kW	1.65 kW
COP	5.07	3.37

**EN 12102-1 | Average Climate**

	Low temperature	Medium temperature
Sound power level indoor	33 dB(A)	33 dB(A)
Sound power level outdoor	54 dB(A)	56 dB(A)

**EN 14825 | Average Climate**

	Low temperature	Medium temperature
$\eta_S$	191 %	143 %
P <sub>rated</sub>	6.93 kW	6.40 kW
SCOP	4.85	3.65
T <sub>biv</sub>	-7 °C	-7 °C
T <sub>OL</sub>	-25 °C	-25 °C
P <sub>dh T<sub>j</sub></sub> = -7°C	6.13 kW	5.67 kW
COP T <sub>j</sub> = -7°C	3.09	2.29
C <sub>dh T<sub>j</sub></sub> = -7 °C	0.900	0.900
P <sub>dh T<sub>j</sub></sub> = +2°C	3.83 kW	3.59 kW
COP T <sub>j</sub> = +2°C	4.67	3.64
C <sub>dh T<sub>j</sub></sub> = +2 °C	0.900	0.900
P <sub>dh T<sub>j</sub></sub> = +7°C	3.29 kW	3.02 kW
COP T <sub>j</sub> = +7°C	6.81	4.99
C <sub>dh T<sub>j</sub></sub> = +7 °C	0.900	0.900
P <sub>dh T<sub>j</sub></sub> = 12°C	3.89 kW	3.62 kW
COP T <sub>j</sub> = 12°C	9.50	6.28
C <sub>dh T<sub>j</sub></sub> = +12 °C	0.900	0.900
P <sub>dh T<sub>j</sub></sub> = T <sub>biv</sub>	6.13 kW	5.67 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.09	2.29
P <sub>dh T<sub>j</sub></sub> = T <sub>OL</sub> or P <sub>dh T<sub>j</sub></sub> = T <sub>designh</sub> if T <sub>OL</sub> < T <sub>designh</sub>	5.64 kW	5.09 kW
COP T <sub>j</sub> = T <sub>OL</sub> or COP T <sub>j</sub> = T <sub>designh</sub> if T <sub>OL</sub> < T <sub>designh</sub>	2.98	2.10
C <sub>dh T<sub>j</sub></sub> = T <sub>OL</sub> or P <sub>dh T<sub>j</sub></sub> = T <sub>designh</sub> if T <sub>OL</sub> < T <sub>designh</sub>	0.900	0.900
WT <sub>OL</sub>	56 °C	56 °C
P <sub>off</sub>	20 W	20 W
PTO	23 W	23 W
PSB	20 W	20 W
PCK	30 W	30 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.29 kW	1.32 kW
Annual energy consumption Q <sub>he</sub>	2953 kWh	3622 kWh