Technical Report No.: 64.181.25.00819.01 Rev.00

Date: 2025-08-22

Client:	Name:	Guangdong JNOD New Energy Technology Co., Ltd.
	Address:	5th Building WISDOM CREATE WEALTH Industrial Park, Xingtan, Shunde 528325, Foshan, Guangdong, People's Republic of China
	Contact person:	Mr. Huang Weiping
Manufacturer:	Name:	Guangdong JNOD New Energy Technology Co., Ltd.
	Address:	5th Building WISDOM CREATE WEALTH Industrial Park, Xingtan, Shunde 528325, Foshan, Guangdong, People's Republic of China
Factory:	Name:	Guangdong JNOD New Energy Technology Co., Ltd.
	Address:	5th Building WISDOM CREATE WEALTH Industrial Park, Xingtan, Shunde 528325, Foshan, Guangdong, People's Republic of China
Test object:	Product:	Domestic Hot Water Heat Pump
	Model:	J12HW200V2
	Trade mark:	--
Test specification:	EN 16147:2017+A1:2022 EN 12102-2:2019	
Purpose of examination:	• Testing and evaluation (☐ visual / ☐ partial) according to the test specification	
Test result:	The test results show that the presented product is in compliance with the above listed test specifications.	

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1. Description of the test object

1.1 Function

Manufacturer's specification for intended use:

The appliance is an air/ water heat pumps with electrically driven compressor including a domestic hot water storage tank, for indoor used.

Manufacturer's specification for predictive use:

According to the user manual.

1.2 Consideration of the foreseeable use

☐ Not applicable
☒ Covered through the applied standard
☐ Covered by the following comment
☐ Covered by attached risk analysis

1.3 Technical Data

Model(s)	:	J12HW200V2
Rated Voltage (V)	:	220-240V~
Rated Frequency (Hz)	:	50
Rated Power (W)	:	see the nameplate
Rated Current (A)	:	see the nameplate
Auxiliary heater power (kW)	:	see the nameplate
Protection Class	:	☒ Class I; ☐ Class II; ☐ Class III
Degree of Protection	:	IP X1
Construction	:	☒ Stationary ☐ Portable ☐ Hand-held ☐ Open-frame
Supply connection	:	☐ Non detachable cord ☒ Permanent connection to fixed wiring ☐ Appliance inlet
Operation mode	:	☒ Continuous operation; ☐ Intermittent operation; ☐ Short time operation;
Rated capacity (L)	:	see the nameplate
Net Weight (kg)	:	72kg
Refrigerant	:	R290 / 0.15kg
Noise (dB(A))	:	N/A
Series No.	:	UKJ12HW200V2250804-001

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2. Order

2.1 Date of Purchase Order, Customer's Reference

- Date of Purchase Order: 2025-08-05
- Customer's Reference: Guangdong JNOD New Energy Technology Co., Ltd.

2.2 Test Sample(s)

- Reception date(s): 2025-08-05
- Location(s) of reception:
  For Energy test and Nosie test:
  Guangzhou Customs District Technology Center
  (CNAS accredited laboratory with Registration No.CNAS L2322)
  Address: No.3, Desheng East Road, Daliang, Shunde District, Foshan, Guangdong, China

- Condition of test sample(s): completed and can be normal operation

2.3 Date(s) of Testing

2025-08-05 to 2025-08-12

2.4 Location(s) of Testing

Same as 2.2

3. Test Results

☒ Decision rule according to ILAC-G8:09/2019 clause 4.2.1 Binary statement for simple acceptance rule or IEC Guide 115:2023, clause 4.3 Simple acceptance was applied.

☐ Decision rule according to customer's requirements was applied. It is:

☐ Decision rule according to ILAC-G8:09/2019 clause 4.2.2 Binary statement with guard band - guard band length = 95 % extended measurement uncertainty, was applied.

☐ Decision rule (based on ILAC-G8:09/2019 clause 4.2.3 Non-binary statement with guard band, guard band length = 95 % extended measurement uncertainty) for an upper specification limit (A lower limit or specification with an up-per and a lower limit is treated similarly.):

- Compliance with the requirement: If a specification limit is not breached by a measurement result plus the expanded uncertainty with a 95% coverage probability, then compliance with the specification will be stated (e. g. Pass).
- Non-compliance with the requirement: If a specification limit is exceeded by the measurement result minus the expanded uncertainty with a 95% coverage probability, then non-compliance with the specification will be stated (e. g. Fail).
- Inconclusive result: If a measurement result plus/minus the expanded uncertainty with a 95 % coverage probability overlaps the limit it will be stated that it is not possible to state compliance or non-compliance.

☐ There are no statements to conformity or no results with measurand stated in this report, no decision rule has been applied.

Test results refer to Appendix No.1: Format of test results.

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4. Remark

4.1 General

The user manual has been examined according to the minimum requirements described in the product standard. The manufacturer is responsible for the accuracy of further particulars as well as of the composition and layout.

4.2 When the product is placed on the market, it must be accompanied with safety Instructions written in official language of the country. The instructions shall give information regarding safe operation, installation and maintenance.

5. Documentation

- Appendix No.1: Format of test results
- Appendix No.2: Marking plate
- Appendix No.3: Photo documentations
- Appendix No.4: Construction data form
- Appendix No.5: Test equipment list

6. Test History

1. The appliance is an air/ water heat pumps with electrically driven compressor including a domestic hot water storage tank, for indoor used.
2. The appliance is supplied by a 3-pole supply cord connecting to fixed wiring.
3. The test was performed according to test specifications and the standard EN 16147 requirements, the unit were performed on the condition below:

Item	Installation or setting
Air duct	duct length is for inlet and outlet together less than 2 m
Load profile	L
Thermostat set point temperature	53 °C
Temperature of the incoming cold water	10 °C
Test voltage	230 V, 50 Hz
Type of heat source	Outdoor air (placed indoor side)
Heat source Air Dry(wet) bulb temperature	7 °C (6 °C) Average climate
Ambient temperature of heat pump	20 °C
Ambient temperature of storage tank	20 °C
Operating setting	Heat pump only

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TÜV SÜD Group

Tested by: Yongxin Huang, Project Handler

printed name, function & signature

Approved by: Plum Li, Designated Reviewer

printed name, function & signature

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Appendix No.1: Format of test results

Outdoor air (placed indoor side) Average climate (Table 1 to Table 7):

Table 1: Filling and storage [stage B]		
Measured quantity	**Unit**	**Recorded data**
Rated volume of the hot water storage tank V_m	l	200.0

Table 2: Filling and heating up period [stage C]		
Measured quantity	**Unit**	**Recorded data**
Heat source, Ambient DB/WB	°C	7.11/6.05
Ambient temperature of storage tank	°C	20.04
Test Voltage	V	229.98
Test Frequency	Hz	50
Heating up electrical energy consumption: $W_{eh\text{-}HP}$	kWh	2.168
Heating up time: t_h	s	22169

Table 3: Standby power input [stage D]		
Measured quantity	**Unit**	**Recorded data**
Heat source, Ambient DB/WB	°C	7.11/6.05
Ambient temperature of storage tank	°C	20.04
Test Voltage	V	229.98
Test Frequency	Hz	50
Total electrical energy consumption during the last on-off-cycle: $W_{es\text{-}HP}$	kWh	0.657
Duration of the last on-off-cycle of the heat pump: t_{es}	s	76689
Standby power input: P_{es}	kW	0.031

Table 4: Water draw-offs and COP calculation [stage E]		
Measured quantity	**Unit**	**Recorded data**
Heat source, Ambient DB/WB	°C	7.11/6.05
Ambient temperature of storage tank	°C	20.04
Test Voltage	V	229.98
Test Frequency	Hz	50
Load profile time in hours: t_{TTC}	H	40.61
Total useful energy content during the load profile: Q_{LP}	kWh	11.690
Useful energy during one single draw-off: $Q_{HP\text{-}tap}$	kWh	11.580
Calculated heat energy produced by electrical resistance heater during the whole load profile: $Q_{EL\text{-}LP}$	kWh	0.110

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Appendix No.1: Format of test results

Total electrical energy consumption during the whole load profile: W_{EL-LP}	kWh	3.595
Total measured electrical energy consumption: $W_{EL-M-LP}$	kWh	4.000
Standby power input: P_{es}	kW	0.031
Coefficient of performance: COP_{DHW}	--	3.252

Table 5: Reference hot water temperature and volume of mixed water at 40 °C [stage F]		
Measured quantity	**Unit**	**Recorded data**
Heat source, Ambient DB/WB	°C	7.11/6.05
Ambient temperature of storage tank	°C	20.04
Test Voltage	V	229.98
Test Frequency	Hz	50
Time from starting the draw-off until θ'_{WH} is less than 40°C: t40	s	904
Reference hot water temperature: θ'_{WH}	°C	52.35
Maximum volume of mixed water at 40°C: V_{40}	l	213

Table 6: Water heating energy efficiency (η_{wh})		
Measured quantity	**Result**	**Remark**
Declared load profile:	L	--
Total electrical energy consumption during the smart period of the smart cycle Q_{elec}^{smart} ***	N/A	No smart control function
Total useful energy content during the smart period of the smart cycle Q_{LP}^{smart} ***	N/A	No smart control function
Smart control factor SCF *	N/A	No smart control function
Smart control compliance smart	0	No smart control function
Standby heat loss: P_{stby} (kW)***	0.078	--
Ambient correction term: Q_{cor} (kWh)***	-0.428	--
Reference energy of the load profile: Q_{ref} (kWh)***	11.655	--
Daily electrical energy consumption: Q_{elec} (kWh)***	3.584	--
Water heating energy efficiency (smart=0): η_{wh} *	136.6 %	--
Water heating energy efficiency (smart=1): η_{wh} *	N/A	No smart control function
Water heating energy efficiency classes:	A+	(According (EU) No 812/2013 ANNEX II Table 1)
Annual electrical energy consumption (AEC) (kWh/a)****	750	--

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Appendix No.1: Format of test results

Supplementary information: Number of brine pump considered: no Setting of controls: Heating mode, thermostat set point temperature: 53°C Remark: Rounding to: *) 1 decimal places; **) 2 decimal places; ***) 3 decimal places; ****) nearest integer

Table 7: Other performance		
Measured quantity	**Unit**	**Recorded data**
Rated heat output: P_{rated}	kW	1.207
Seasonal coefficient of performance: $SCOP_{DHW}$	–	3.252

Table 8: Noise tests data:			
	Heat source, Ambient DB/WB..... (°C):	7.00 °C / 6.00 °C	
	Ambient temperature of storage tank .... (°C):	20 °C	
	Voltage ..... (V):	230V~	
	Frequency ..... (Hz):	50Hz	
	Working condition class.....:	Class A	
	Acoustical environment.....:	Hemi-anechoic	
	Windshield type.....:	Sponge	
	Measured position amount .....:	9	
	Water flow .... (m³/h):	--	

Measured quantity	$L_{WA,Indoor\ unit}$	$L_{WA,Outdoor\ unit}$	Remark
Averaged sound pressure level L_p****	36 dB(A)	-	-
Measurement distance d *	1.0m	-	-
Sound power level L_{wA}****	52 dB(A)	-	-

Supplementary information: --

Setting of controls: Heating mode

Remark:

1. Rounding to: *) 1 decimal places; **) 2 decimal places; ***) 3 decimal places; ****) nearest integer

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Appendix No.1: Format of test results

Table 9: Other tests	
Clause 8.1 Temperature operating range	
(Test 1: minimal heat source temperature)	
Comment	Test Response
From the machine starting conditions - i.e. - the machine was brought to the operating conditions declared by the manufacturer for the heating mode- i.e. Tair= -5.00 °C, T inlet water 10 °C, T outlet water 60.00 °C. Once these conditions were obtained, immediately after the heat pump stops the first time, 50 % of the nominal tank volume is tapped, the hot water flow rate is the maximum flow rate of the declared load profile and the hot water temperature is measured 61.56 °C. During the test, no waring or alarm were showed. No damage was recorded on the machine during and after the test.	Passed
(Test 2: maximal heat source temperature)	
Comment	Test Response
From the machine starting conditions - i.e. - the machine was brought to the operating conditions declared by the manufacturer for the heating mode- i.e. Tair= 45.00 °C, T inlet water 10 °C, T outlet water 60.00 °C. Once these conditions were obtained, immediately after the heat pump stops the first time, 50 % of the nominal tank volume is tapped, the hot water flow rate is the maximum flow rate of the declared load profile and the hot water temperature is measured 61.52 °C. During the test, no waring or alarm were showed. No damage was recorded on the machine during and after the test.	Passed
Clause 8.3 Safety devices checking test	
(Shutting off the heat transfer medium flows)	
a) blocking of the heat source system	
Comment	Test Response
The air flow rate was shutted off through a plastic sheet and a panel. The machine never turned off. It continued to operate with continuous frosting and defrosting cycles. After more than 1 hour, the air flow rate was restored and the machine started to operate normally. During the test, no waring or alarm were showed. No damage was recorded on the machine during and after the test.	Passed
b) blocking the heat transfer medium flow of the heat sink system	
Comment	Test Response
The water flow rate was shutted off trough manual and automatic valves of the test rig. The machine switched off at least 1 hour and during the whole test no error appeared on the user interface of unit. Once the water flow rate was restored, the machine restarted automatically. No damage was recorded on the machine during and after the test.	Passed
(Complete power supply failure)	
Comment	Test Response
The power supply was cut off for about 10 seconds. The unit restarted automatically as soon as the power supply was reactivated, during this test, the unit was not damaged.	Passed

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Appendix No.1: Format of test results

Clause 8.4 Condensate draining	
Comment	Test Response
The draining of condensate shall be observed, when operating at the standard conditions given in Table 4 and Table 5. During the tests no condensed water shall drip, run or blow off the unit except through the drain.	Passed

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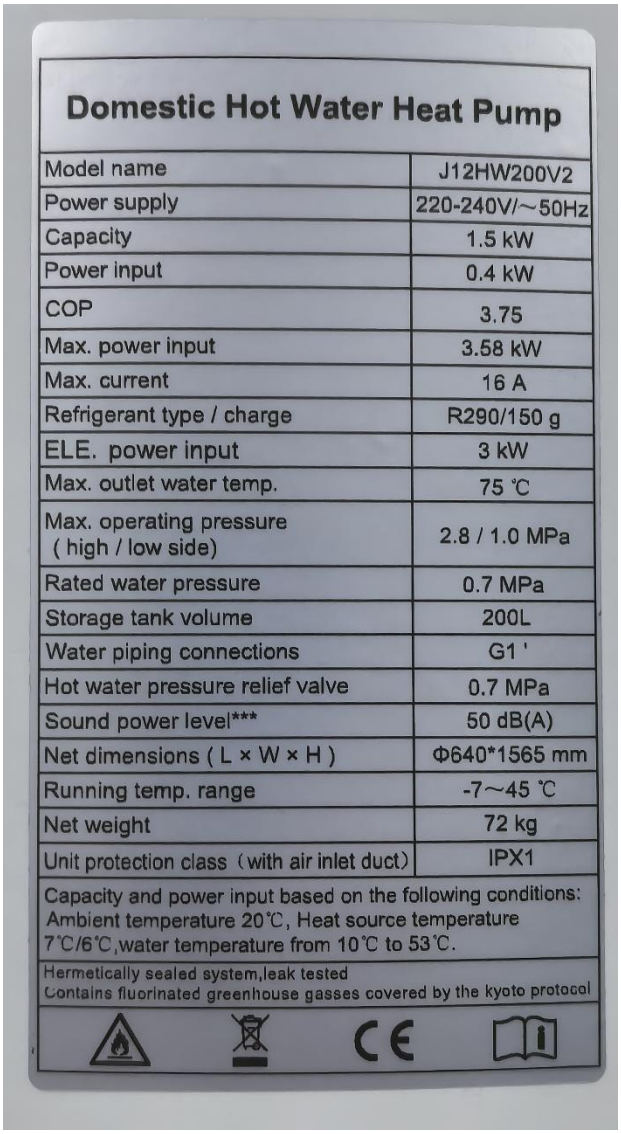
Appendix No.2: Marking plate

The artwork below may be only a draft.

Nameplate



Domestic Hot Water Heat Pump	
Model name	J12HW200V2
Power supply	220-240V/~50Hz
Capacity	1.5 kW
Power input	0.4 kW
COP	3.75
Max. power input	3.58 kW
Max. current	16 A
Refrigerant type / charge	R290/150 g
ELE. power input	3 kW
Max. outlet water temp.	75 ℃
Max. operating pressure (high / low side)	2.8 / 1.0 MPa
Rated water pressure	0.7 MPa
Storage tank volume	200L
Water piping connections	G1 '
Hot water pressure relief valve	0.7 MPa
Sound power level***	50 dB(A)
Net dimensions (L × W × H)	Φ640*1565 mm
Running temp. range	-7~45 ℃
Net weight	72 kg
Unit protection class （with air inlet duct）	IPX1
Capacity and power input based on the following conditions: Ambient temperature 20℃, Heat source temperature 7℃/6℃,water temperature from 10℃ to 53℃.	
Hermetically sealed system,leak tested Contains fluorinated greenhouse gasses covered by the kyoto protocol	

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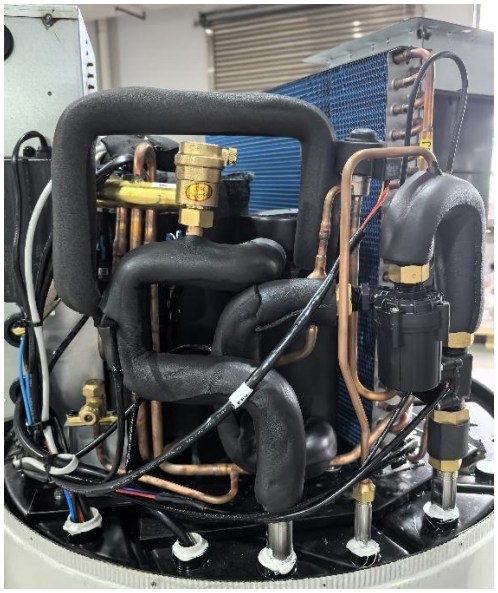
Appendix No.3: Photo documentations

Details of:	General view
View: ☐ General ☐ Front ☐ Rear ☐ Right ☐ Left ☐ Top ☐ Bottom	

Details of:	Internal view
View: ☐ General ☐ Front ☐ Rear ☐ Right ☐ Left ☐ Top ☐ Bottom	

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Appendix No.3: Photo documentations

Details of:	Compressor
View: ☐ General ☐ Front ☐ Rear ☐ Right ☐ Left ☐ Top ☐ Bottom	

Details of:	Fan motor
View: ☐ General ☐ Front ☐ Rear ☐ Right ☐ Left ☐ Top ☐ Bottom	

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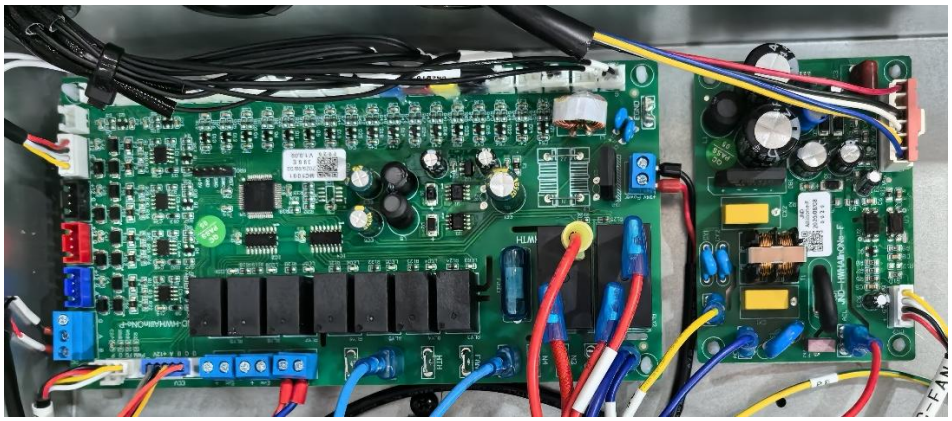
Appendix No.3: Photo documentations

Details of:	Main controller
View: ☐ General ☐ Front ☐ Rear ☐ Right ☐ Left ☐ Top ☐ Bottom	

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Appendix No.4: Construction data form

Part		Technical data
1. Compressor		
	Manufacture	GMCC
	Type	RDSN89V11TZZ
	Serial-number	G01351263AC0
	Rated input	220-240V~; 50Hz; R290 with a capacitor 15μF/450VAC
2. Condenser		
	Manufacture	Gimleo Heat Exchanger Co.,Ltd
	Type	GBD01-CMF
	Heat exchanger	Shell and Tube Heat Exchanger
	Dimension	Φ101mm*247mm
3. Evaporator		
	Manufacture	Guangdong Spiker Air Conditioning Equipment Co., Ltd.
	Type	J12HWH-3-01
	Heat exchanger	Finned heat exchanger
	Dimension	420mm*336mm*36.38mm
4. Fan motor of evaporator		
	Manufacture	Jiangmen LT Motor Co.,Ltd.
	Type	RD45HK
	Specification	DC310V; 34W
5. Controller		
	Manufacture	Foshan Shunde Zhuojing Electronics Technology Co., Ltd.
	Type	JND-HWHAllInONe-P
6. Heater		
	Manufacture	Zhaoqing Meiri Electric Appliance Co., Ltd.
	Type	MR-1940004
	Specification	3,0kW; 220V~; 50Hz

Appendix No.5: Test equipment list

Equipment	Brand / Manufacturer	Model	ID No.	Calibration due date
30HP Enthalpy difference laboratory (Water system)	Guangzhou Linxin	/	/	2026-04-15
Noise Meter and PULSE Sound Power	B&K / Brüel & Kjær Sound & Vibration Measurement A/S.	3560-B-010 PULSE	202444CK0032-3	2026-06-26
Power Analyzer	HIOKI/ HIOKI E.E. CORPORATION	3334	200844CK0084	2026-06-26
Atmospheric Pressure Meter	FENGYANG/TIANJIN FENGYANG INSTRUMENT INDUSTRIAL AND TRADING CO. LTD	DYM3	200944BK0273	2025-11-11
'1/2" Free-field Microphone	B&K / Brüel & Kjær Sound & Vibration Measurement A/S.	4190-L-001	202444CK0032-4 202444CK0032-5 202444CK0032-6 202444CK0032-7 202444CK0032-8 202444CK0032-9 202444CK0032-10 202444CK0032-11 202444CK0032-12	2026-06-26
Hygrometer	UNI-T	UT332	201444CK0004SD	2025-11-10
Tape Measure	0-3000mm	3m	201444CK0026SD	2025-11-21

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