

Technical Report No.: 64.181.22.01855.01 Rev.00

Date: 2022-06-14

Client: Report holder's name: Zhongshan Amitime Electric Co., LTD

Report holder's Address: 5th Yandong Rd, Dayan Industrial Zone, Huangpu Town, Zhongshan City, Guangdong, PEOPLE'S REPUBLIC OF CHINA

Contact person of report holder: Mr. WangKui Zhou

Manufacturer's name: Zhongshan Amitime Electric Co., LTD

Manufacturer's address: 5th Yandong Rd, Dayan Industrial Zone, Huangpu Town, Zhongshan City, Guangdong, PEOPLE'S REPUBLIC OF CHINA

Factory: Factory's name: Zhongshan Amitime Electric Co., LTD

Factory's address: 5th Yandong Rd, Dayan Industrial Zone, Huangpu Town, Zhongshan City, Guangdong, PEOPLE'S REPUBLIC OF CHINA

Test object: Product: DC Inverter Air To Water Heat Pump Unit
 Model: Indoor unit: PAVH-09V1DC/IB; outdoor unit: PAVH-09V1FEB

Trade name: -

Test specification: EN 14825:2018
 (EU) No 813/2013
 EN 12102-1:2017
 EN 14511-4:2018 Clause 4

Purpose of examination: Test according to the test specification
 EU 2016/2282:2016-11-30

Test result: The test results show that the presented product is in compliance with the above listed test specifications.

Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question. It does not imply a general statement regarding the quality of products from regular production. For further details please see testing and certification regulation, chapter A-3.4.

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1 Description of the test object

1.1 Function

Manufacturer’s specification for intended use:
 The appliance is air to water heat pump.
 Manufacturer’s specification for predictive use:
 According to 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 :	Indoor unit: PAVH-09V1DC/IB; outdoor unit: PAVH-09V1FEB
Rated Voltage (V) :	220-240V~
Rated Frequency (Hz) :	50
Rated Power (W) :	6200 (heating mode), 2410 (cooling mode)
Rated Current (A) :	N/A
Protection Class :	Class I
Protection Against Moisture :	Indoor unit: IPX0; outdoor unit: IPX4
Construction :	Stationary
Supply connection :	<input type="checkbox"/> Non detachable cord <input checked="" type="checkbox"/> Permanent connection to fixed wiring
Operation mode:	<input checked="" type="checkbox"/> Continuous operation; <input type="checkbox"/> Intermittent operation; <input type="checkbox"/> Short time operation;
Refrigerant/charge (g) :	R32 /1400
Declared parameters :	<input checked="" type="checkbox"/> Average <input type="checkbox"/> Warmer <input type="checkbox"/> Colder
Sound power level dB(A) :	N/A
Series No :	AL0265-OD-2009 for outdoor unit; AL0265-ID-2009 for indoor unit

2 Order

2.1 Date of Purchase Order, Customer's Reference

2022-05-17, Zhongshan Amitime Electric Co., LTD

2.2 Test Sample(s)

• Reception date(s): 2022-05-17

• Location(s) of reception:

For Energy test:

GZ-Lans Experimental Technology Co., Ltd. Laboratory

Address: No.16, Juncheng Road, Huangpu district, Guangzhou, China

For Noise tests:

Vkan Certification & Testing Co., Ltd

Address: No.3, Tiantaiyi Road, Kaitai Avenue, Science City, Guangzhou, P.R.China

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

2.3 Date(s) of Testing

2022-05-17 to 2022-05-27

2.4 Location(s) of Testing

Same as 2.2

2.5 Points of Non-compliance or Exceptions of the Test Procedure

N/A

3 Test Results

3.1 Positive Test Results

See Appendix I

4 Remark

N/A

4.1 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 par-ticulars as well as of the composition and layout.

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

5 Documentation

- Appendix I Test results
- Appendix II Marking plate
- Appendix III photo documentation
- Appendix IV Construction data form
- Appendix V Test equipment list

6 Summary

- 1) The appliance is DC Inverter Type Air To Water Unit, including a whole compression type refrigerant circuit to heat water in another circuit. The appliance was for cooling and heating water function, this report only for heating capacity test.
- 2) The main power is supplied by a 3-pole supply cord connecting to fixed wiring.
- 3) Water enthalpy method was adopted in this report.
- 4) Standby mode power, off mode power and thermostat-off mode power were tested according to clause 12 of standard EN 14825:2018.

**TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch
TÜV SÜD Group**

Tested by: William Liang, Project Handler

printed name, function & signature

Approved by: Plum Li, Designated Reviewer

printed name, function & signature



The image shows two handwritten signatures in black ink. The first signature, 'William Liang', is written over the top half of a blue circular stamp. The second signature, 'Plum Li', is written over the bottom half of the same stamp. The stamp itself is a circular seal with 'TUV SUD' in the center and 'TUV SUD CERTIFICATION AND TESTING (CHINA) CO., LTD. GUANGZHOU BRANCH' around the perimeter.

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Appendix I Test results

Table 1.	Heating mode(Low temperature application):						P	
Model	Indoor unit: PAVH-09V1DC/IB; outdoor unit: PAVH-09V1FEB							
Product type	Air to Water	Heating season	<input checked="" type="checkbox"/>	Average	<input type="checkbox"/>	Warmer	<input type="checkbox"/>	Colder
1. Test conditions:								
Condition	Part Load Ratio in %				Outdoor heat exchanger	Indoor heat exchanger		
	Formula	A	W		Inlet dry (wet) bulb temperature °C	Inlet/outlet water temperatures (°C)		
A	$(-7-16)/(T_{designh-16})$	88	N/A	N/A	-7(-8)	a / 34		
B	$(+2-16)/(T_{designh-16})$	54	N/A	N/A	2(1)	a / 30		
C	$(+7-16)/(T_{designh-16})$	35	N/A	N/A	7(6)	a / 27		
D	$(+12-16)/(T_{designh-16})$	15	N/A	N/A	12(11)	a / 24		
E	$(TOL-16)/(T_{designh-16})$				TOL	a / 35.3		
F	$(T_{bivalent-16})/(T_{designh-16})$				T _{biv}	a / 34		
G	$(-15-16)/(T_{designh-16})$	N/A	N/A	N/A	-15	N/A		
Remark: a) With the water flow rate as determined at the standard rating conditions given in EN14511-2 at 30/35 conditions, the capacity is 5710.68W, the power is 1070.29W, COP is 5.34.								
2. Tested data/correction data(Average):								
General test conditions/ Part-Load	Unit	A(-7)/W34 (88%)	A2/W30 (54%)	A7/W27 (35%)	A12/W24 (15%)	A(-10)/W35.3 (100%)	A(-7)/W34 (88%)	
	--	A	B	C	D	E	F	
Data collection period	hh: min:sec	2:00:00	4:00:00	2:00:00	2:00:00	2:00:00	2:00:00	
The heat pump defrosts	--	Yes	No	No	No	Yes	Yes	
Complete Cycles	--	0	1	0	0	0	0	
Barometric pressure	kPa	101.02	101.02	101.02	101.02	101.02	101.02	
Voltage	V	229.3	230.4	229.2	229.4	230.4	229.3	
Current input of the unit	A	7.74	3.54	2.91	2.44	8.21	7.74	
Power input of the unit	kW	1.775	0.811	0.484	0.404	1.893	1.775	
Test conditions indoor unit								
Inlet Water temperature, DB	°C	29.16	26.69	24.27	20.75	30.80	29.16	
Outlet Water temperature, DB	°C	34.05	29.89	27.01	24.05	35.41	34.05	

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Appendix I Test results

Test conditions outdoor unit							
Air inlet temperature, DB	°C	-7.00	2.00	6.99	12.00	-10.01	-7.00
Air inlet temperature, WB	°C	-8.25	1.04	5.96	10.99	-10.37	-8.25
Summary of the results							
Total heating capacity	kW	5.718	3.746	3.214	3.868	5.391	5.718
Effective power input	kW	1.807	0.844	0.517	0.436	1.926	1.807
Coefficient of performance (COP)	--	3.16	4.44	6.22	8.86	2.80	3.16
Compressor frequency	Hz	85	43	30	30	90	85
Water flow	m ³ /h	1.00	1.00	1.00	1.00	1.00	1.00
Remark: * In part condition, outlet temperature data is recorded by a full average complete cycle's data.							
3.Calculation/conclusion for SCOP(Average):							
Tdesignh(°C)	-10	Tbiv(°C)		-7			
Pdesignh(kW)	6.464	TOL(°C)		-10			
Test result A, B, C, D, E, F conditions:							
Condition	Part load	Measured capacity	COP at measured capacity	Cdh	CR	COP at part load	
E	6.464	5.391	2.80	0.00	1.00	2.80	
F	5.718	5.718	3.16	0.00	1.00	3.16	
A	5.718	5.718	3.16	0.00	1.00	3.16	
B	3.481	3.746	4.44	0.00	0.93	4.44	
C	2.238	3.214	6.22	0.99	0.70	6.19	
D	0.995	3.868	8.86	0.99	0.26	8.61	
CR: part load divided by capacity;							

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Appendix I Test results

Electric power consumptions	Unit	Value
Thermostat-off mode [P_{TO}]	kW	0.010
Standby mode [P_{SB}]	kW	0.010
Crankcase heater [P_{CK}]	kW	0.027
Off mode [P_{OFF}]	kW	0.010

Conclusions:	Unit	Value
SCOP _{on} :	kWh/kWh	4.74
SCOP:	kWh/kWh	4.72
Q_H :	kWh/year	13355
Q_{HE} :	kWh/year	2827
$\eta_{s,h}$	%	186.0
Seasonal space heating energy efficiency classes: (According (EU) No 811/2013 Table 2)	--	A+++

Appendix I Test results

Table 2.	Heating mode(Medium temperature application):						P	
Model	Indoor unit: PAVH-09V1DC/IB; outdoor unit: PAVH-09V1FEB							
Product type	Air to Water	Heating season	<input checked="" type="checkbox"/>	Average	<input type="checkbox"/>	Warmer	<input type="checkbox"/>	Colder
1. Test conditions:								
Condition	Part Load Ratio in %				Outdoor heat exchanger	Indoor heat exchanger		
	Formula	A	W	C	Inlet dry (wet) bulb temperature °C	Inlet/outlet water temperatures (°C)		
A	$(-7-16)/(T_{designh-16})$	88	N/A	N/A	-7(-8)	a / 52		
B	$(+2-16)/(T_{designh-16})$	54	N/A	N/A	2(1)	a / 42		
C	$(+7-16)/(T_{designh-16})$	35	N/A	N/A	7(6)	a / 36		
D	$(+12-16)/(T_{designh-16})$	15	N/A	N/A	12(11)	a / 30		
E	$(TOL-16)/(T_{designh-16})$				TOL	a / 55.3		
F	$(T_{biv-16})/(T_{designh-16})$				T _{biv}	a / 52		
G	$(-15-16)/(T_{designh-16})$	N/A	N/A	N/A	-15	N/A		
Remark: a) With the water flow rate as determined at the standard rating conditions given in EN14511-2 at 47/55 conditions, the capacity is 7951.94W, the power is 3024.46W, COP is 2.63.								
2. Tested data/correction data(Average):								
General test conditions/ Part-Load	Unit	A(-7)/W52 (88%)	A2/W42 (54%)	A7/W36 (35%)	A12/W30 (15%)	A(-10)/W55.3 (100%)	A(-7)/W52 (88%)	
	--	A	B	C	D	E	F	
Data collection period	hh: min:sec	2:00:00	2:00:00	2:00:00	2:00:00	2:00:00	2:00:00	
The heat pump defrosts	--	No	No	No	No	No	No	
Complete Cycles	--	0	0	0	0	0	0	
Barometric pressure	kPa	101.02	101.02	101.02	101.02	101.02	101.02	
Voltage	V	228.7	229.6	229.8	219.9	228.7	228.7	
Current input of the unit	A	12.00	4.90	2.98	2.56	12.41	12.00	
Power input of the unit	kW	2.742	1.124	0.679	0.558	2.834	2.742	
Test conditions indoor unit								
Inlet Water temperature, DB	°C	46.53	38.08	32.82	26.29	50.01	46.53	
Outlet Water temperature, DB	°C	51.96	41.97	35.90	30.11	54.96	51.96	

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Appendix I Test results

Test conditions outdoor unit							
Air inlet temperature, DB	°C	-7.00	2.01	7.00	11.99	-10.01	-7.00
Air inlet temperature, WB	°C	-7.96	1.00	6.00	10.99	-10.73	-7.96
Summary of the results							
Total heating capacity	kW	5.315	3.820	3.029	3.762	4.829	5.315
Effective power input	kW	2.752	1.133	0.688	0.568	2.844	2.752
Coefficient of performance (COP)	--	1.93	3.37	4.40	6.63	1.70	1.93
Compressor frequency	Hz	90	45**	30	30	90	90
Water flow	m³/h	0.85	0.85	0.85	0.85	0.85	0.85
Remark: * In part condition, outlet temperature data is recorded by a full average complete cycle's data. **In part condition, (45) Hz is lowest compressor frequency.							
3.Calculation/conclusion for SCOP(Average):							
Tdesignh(°C)	-10		Tbiv(°C)		-7		
Pdesignh(kW)	6.009		TOL(°C)		-10		
Test result A, B, C, D, E, F conditions:							
Condition	Part load	Measured capacity	COP at measured capacity	Cdh	CR	COP at part load	
E	6.009	4.829	1.70	0.00	1.00	1.70	
F	5.315	5.315	1.93	0.00	1.00	1.93	
A	5.315	5.315	1.93	0.00	1.00	1.93	
B	3.235	3.820	3.37	0.99	0.85	3.36	
C	2.080	3.029	4.40	0.99	0.69	4.38	
D	0.924	3.762	6.63	0.99	0.25	6.43	
CR: part load divided by capacity;							

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Appendix I Test results

Electric power consumptions	Unit	Value
Thermostat-off mode [P_{TO}]	kW	0.005
Standby mode [P_{SB}]	kW	0.005
Crankcase heater [P_{CK}]	kW	0.035
Off mode [P_{OFF}]	kW	0.005

Conclusions:	Unit	Value
SCOPon:	kWh/kWh	3.39
SCOP:	kWh/kWh	3.38
Q_H :	kWh/year	12414
Q_{HE} :	kWh/year	3668
$\eta_{s,h}$	%	132.4
Seasonal space heating energy efficiency classes: (According (EU) No 811/2013 Table 1)	--	A++

Appendix I Test results

Table 3a.	Sound power level measurement(Low temperature application)		P
Model	Indoor unit: PAVH-09V1DC/IB; outdoor unit: PAVH-09V1FEB		
	Product type :	Air to Water	
	Outdoor heat exchanger, Air temperature DB/WB (°C):	7.0 /6.0	
	Indoor heat exchanger, Water inlet/outlet temperature (°C):	30.0 /35.0	
	Voltage (V):	230	
	Frequency (Hz):	50	
	Working condition class :	Class A	
	Acoustical environment :	Hemi-anechoic room	
	Windshield type :	Sponge	
	Measured position amount :	20	
	Water flow (m³/h):	1.00	
	Measured quantity	L_{WA,indoors} (dB(A))	L_{WA,outdoors} (dB(A))
	Sound pressure level $\bar{L}_{p(ST)}$ ****	30	38
	Spheres radius d *	2.1m	2.1m
	Sound power level L _{WA} ****	45	53
Setting of controls: according to user manual. Duct connection:-- Rounding to: *) 1 decimal places; **) 2 decimal places; ***) 3 decimal places; ****) nearest integer Fan speed: 480 r/min, compressor speed: 55Hz.			

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Appendix I Test results






Table 3b.	Sound power level measurement(Medium temperature application)		P
Model	Indoor unit: PAVH-09V1DC/IB; outdoor unit: PAVH-09V1FEB		
	Product type :	Air to Water	
	Outdoor heat exchanger, Air temperature DB/WB (°C):	7.0 /6.0	
	Indoor heat exchanger, Water inlet/outlet temperature (°C):	47.0 /55.0	
	Voltage (V):	230	
	Frequency (Hz):	50	
	Working condition class :	Class A	
	Acoustical environment :	Hemi-anechoic room	
	Windshield type :	Sponge	
	Measured position amount :	20	
	Water flow (m³/h):	0.85	
	Measured quantity	L_{WA,indoors} (dB(A))	L_{WA,outdoors} (dB(A))
	Sound pressure level $\bar{L}_{p(ST)}$ ****	31	40
	Spheres radius d *	2.1m	2.1m
	Sound power level L _{WA} ****	46	54
Setting of controls: according to user manual. Duct connection:-- Rounding to: *) 1 decimal places; **) 2 decimal places; ***) 3 decimal places; ****) nearest integer Fan speed: 480 r/min, compressor speed: 55Hz.			

Appendix I Test results

Table 4. Clause 4 of EN 14511-4:2018					P
Customer Code	Execution Date [dd-mm-yyyy]	Testing item	Standard Reference	Comment	Test Response
TEST 1	26-05-2022	STARTING TEST	EN14511-4:2018, §4.2.1.2 Table 3	The "lower" starting operating conditions declared by the manufacturer for the heating mode- i.e. T _{air} =-24.91°C, T _{out water} 13.48°C, Flow rate 0.78m ³ /h have been set and obtained. At those conditions, the machine was switched on. It started without any problem and worked for 30 minutes without showing any warning or alarm. During the test the machine operated in automode. No damage was recorded on the machine during and after the test.	Passed
TEST 2	26-05-2022	OPERATING TEST	EN14511-4:2018, §4.2.1.2 Table 3	From the machine "lower" starting conditions - i.e. - the machine was brought to the lower operating conditions declared by the manufacturer for the heating mode- i.e. T _{air} =-25.00°C, T _{out water} 57.48°C, Flow rate 0.78m ³ /h. Once these conditions were obtained, the machine was let operate for over 1 hour in automode. During the test, no warning or alarm were showed. No damage was recorded on the machine during and after the test.	Passed
TEST 3	26-05-2022	SHUTTING OFF WATER FLOW	EN14511-4:2018, § 4.5	The water flow rate was shutted off through manual and automatic valves of the test rig. The machine switched off and only the flow switch Protection appeared on the user interface of indoor unit. Perform error reset operation , once the water flow rate was restored, the machine restarted automatically and worked for 30 minutes normally. No damage was recorded on the machine during and after the test.	Passed
TEST 4	26-05-2022	SHUTTING OFF AIR FLOW	EN14511-4:2018, § 4.5	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 half an hour, the air flow rate was restored and the machine started to operate normally. During the test, no warning or alarm were showed. No damage was recorded on the machine during and after the test.	Passed
TEST 5	26-05-2022	COMPLETE POWER SUPPLY FAILURE	EN14511-4:2018, § 4.6	The power supply was cut off for about 10 seconds. The unit restarted automatically within about 3 minutes after the power supply was reactivated.	Passed






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Appendix II Marking plate

Nameplate	
Indoor unit: PAVH-09V1DC/IB	
	
DC Inverter Air to Water Heat Pump Unit	
Indoor Unit	
O:AL0265	
Model Number:	PAVH-09V1DC/IB
Input Voltage:	220-240V~/50Hz
Input Power-Cooling:	2410 W
Input Power-Heating:	3200 W
Circuit Breaker:	30A
Electrical heater:	3000W
Cooling Capacity:	4900-7200 W
Heating Capacity:	4300-9200 W
Rated Input Power-Cooling:	2410 W
Rated Input Power-Heating:	3000W+3200 W
Operation pressure (low side):	1.4MPa
Operation pressure (high side):	4.2MPa
Refrigerant:	R32/ 0g
Max EER Cooling:	3.10 W/W
Max COP Heating:	4.80 W/W
Net Weight:	25kg
For indoor use only. Installation & service by licensed mechanic only.   	
Serial Nr:	AL0265-ID-2009
	
Zhongshan Amitime Electric Co.,LTD. 5th Yandong Rd, Dayan Industrial Zone, Huangpu Town, 528429 Zhongshan City,Guangdong, CHINA.	


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Appendix II Marking plate

Nameplate	
Outdoor unit: PAVH-09V1FEB	
	
DC Inverter Air to Water Heat Pump Unit	
	Outdoor Unit
	O:AL0265
Model Number:	PAVH-09V1FEB
Input Voltage:	220-240V~/50Hz
Input Power-Cooling:	2410 W
Input Power-Heating:	3200 W
Circuit Breaker:	30A
Supplementary Heaters Power Input:	3000W
Cooling Capacity:	4900-7200 W
Heating Capacity:	4300-9200 W
Rated Input Power-Cooling:	2410 W
Rated Input Power-Heating:	3000W+3200 W
Operation pressure (low side):	1.4MPa
Operation pressure (high side):	4.2MPa
PS hydraulic circuit:	0.3MPa
Refrigerant:	R32/ 1400g
Max EER Cooling:	3.10W/W
Max COP Heating:	4.80W/W
Net Weight:	78kg
For outdoor use only. Installation & service by licensed mechanic only.	
	  
Serial Nr:	AL0265-OD-2009
	
Zhongshan Amitime Electric Co.,LTD. 5th Yandong Rd, Dayan Industrial Zone, Huangpu Town, 528429 Zhongshan City,Guangdong, CHINA.	

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Appendix III photo documentaiton

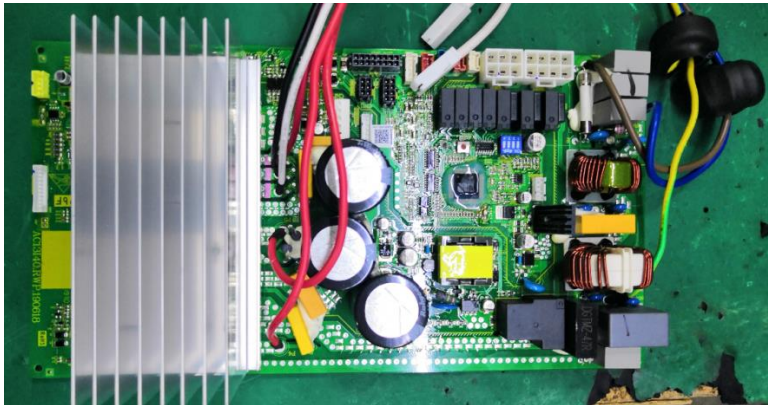
Details of:	Overall view for outdoor unit
View:	
<input type="checkbox"/> General	
<input type="checkbox"/> Front	
<input type="checkbox"/> Rear	
<input type="checkbox"/> Right	
<input type="checkbox"/> Left	
<input type="checkbox"/> Top	
<input type="checkbox"/> Bottom	

Details of:	Compressor for outdoor unit
View:	
<input type="checkbox"/> General	
<input type="checkbox"/> Front	
<input type="checkbox"/> Rear	
<input type="checkbox"/> Right	
<input type="checkbox"/> Left	
<input type="checkbox"/> Top	
<input type="checkbox"/> Bottom	

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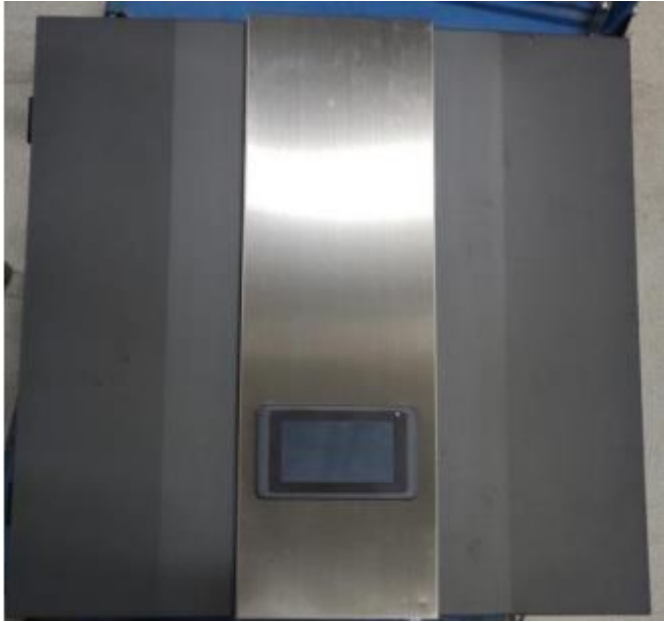
Appendix III photo documentaiton


Details of:	Fan motor for outdoor unit
View:	
<input type="checkbox"/> General	
<input type="checkbox"/> Front	
<input type="checkbox"/> Rear	
<input type="checkbox"/> Right	
<input type="checkbox"/> Left	
<input type="checkbox"/> Top	
<input type="checkbox"/> Bottom	

Details of:	Main control board for outdoor unit
View:	
<input type="checkbox"/> General	
<input type="checkbox"/> Front	
<input type="checkbox"/> Rear	
<input type="checkbox"/> Right	
<input type="checkbox"/> Left	
<input type="checkbox"/> Top	
<input type="checkbox"/> Bottom	

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Appendix III photo documentaiton

Details of:	Over view for indoor unit
View:	
<input type="checkbox"/> General	
<input type="checkbox"/> Front	
<input type="checkbox"/> Rear	
<input type="checkbox"/> Right	
<input type="checkbox"/> Left	
<input type="checkbox"/> Top	
<input type="checkbox"/> Bottom	

Details of:	Main control board for indoor unit
View:	
<input type="checkbox"/> General	
<input type="checkbox"/> Front	
<input type="checkbox"/> Rear	
<input type="checkbox"/> Right	
<input type="checkbox"/> Left	
<input type="checkbox"/> Top	
<input type="checkbox"/> Bottom	

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Appendix IV Construction data form

Part		Technical data
1. Compressor		
	Manufacture:	Mitsubishi Electric (Guangzhou) Compressor Co., Ltd.
	Type:	SVB172FNPMC
	Rated capacity:	5450W
	Serial-number:	7005197282
	Specification:	27-200V; 30-390Hz; R32
2. Condenser		
	Manufacture:	SWEP
	Type:	B26Hx28/1P-SC-M
	Heat exchanger:	Plate heat exchanger
	Dimension (mm):	376*119*36,6mm
3. Evaporator		
	Manufacture:	Foshan huize heat exchange equipment co. LTD
	Type:	PAVH-09V1FBA
	Heat exchanger:	Finned-coil heat exchanger
	Dimension (mm):	860×800×Φ7×25 ×1,8
4. Fan motor		
	Manufacture:	Nippon electric power(zhejiang)CO.LTD
	Type:	SIC-65FV-F162-1
	Fan type:	3 blade
	Specification:	DC310V; 8P; 62W
5. Main control board		
	Manufacture:	Ruking Emerson Climate Technologies (Shanghai) Co., Ltd
	Type:	AC13I40
	Specification:	220-240V; 50Hz



Appendix V Equipment List

No.	Type	Manufacture	Model	Equipment ID	Calibration Due Date
1	R&A performance measuring system	GEI	20kW	-	2022-08-02
2	Temperature and humidity meter	VAISALA	HMD42	H5110021	2022-08-02
3	Platinum resistance	YINUO	Pt100	TS-0167C0447	2022-10-11
4	Platinum resistance	YINUO	Pt100	TS-0167C0436	2022-10-11
5	Platinum resistance	YINUO	Pt100	TS-0167C0364	2022-10-11
6	Platinum resistance	YINUO	Pt100	TS-0167C0365	2022-10-11
7	Flowmeter	YOKOGAWA	LDY-25S	2161283	2022-10-11
8	Flowmeter	YOKOGAWA	LDY-25S	2161284	2022-10-11
9	Flowmeter	YOKOGAWA	LDY-50S	2161282	2022-10-11
10	Pressure transmitter	MICRO	(0-400)KPa	91S407769	2022-08-02
11	Pressure transmitter	MICRO	(0-400)KPa	91S922127	2022-08-02
12	Digital power meter	8916010015	8904F	-	2023-01-02
13	Anechoic rooms (indoor side: hemi-	NC-036-2	-	Guangzhou Kinte	2023-10-07
14	Anechoic rooms (outdoor side: hemi-	NC-036-2	-	Guangzhou Kinte	2023-10-07
15	Microphone	HJ-000123	4189	B & K	2022-06-23
16	Microphone	HJ-000110	4189	B & K	2022-06-23
17	Microphone	HJ-000122	4189	B & K	2022-06-23
18	Microphone	HJ-000107	4189	B & K	2022-06-23
19	Microphone	HJ-000119	4189	B & K	2022-06-23
20	PULSE system	VG DY-0184	3660C	B & K	2023-04-08
21	6 channel data logger	VG DY-0257	PXI-1033	-	2023-05-20
22	Calibrator	HJ-000095	4231	B & K	2022-06-30
23	Three-phase power supply	VG DS-0637	AFC-33030TS	-	2022-11-07
24	Long steel tape	HJ-000150	5m	-	2023-01-01
25	Temperature measurement system	NC-036-1	-	-	2023-06-07

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26	Atmospheric pressure meter	HJ-000165	-	-	2022-11-30
27	Constant temperature water system	VGDS-0448	-	-	2023-04-19
28	Windscreen	-	WS002-5	BSWA TECH	-

-- End of Report --