

Technical Report No.: 64.181.22.03966.01 Rev.00

Date: 2022-11-02

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 Type Air To Water Unit
 Model: Indoor unit: PEVH-45V4DEA/IA;
 Outdoor unit: PEVH-45V4DEA

Trade name: -

Test specification: EN 14825:2018
 EN 12102-1:2017
 EN 14511-4:2018 Clause 4
 EN 14511-3:2018

Purpose of examination: Test according to the test specification
 (EU) No 813/2013
 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.

Doc No.: ITC-TTW0902.02E -- Rev.11

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: PEVH-45V4DEA/IA; Outdoor unit: PEVH-45V4DEA
Rated Voltage (V) :	380-415V, 3N~
Rated Frequency (Hz) :	50
Rated Power (W) :	14308.0 W(Heating) 11640.0 W(cooling)
Rated Current (A) :	N/A
Protection Class :	Class I
Protection Against Moisture :	IP X4
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) :	R410A / 8000g <input checked="" type="checkbox"/> Average <input type="checkbox"/> Warmer <input type="checkbox"/> Colder
Sound power level dB(A) :	N/A
Series No :	Indoor unit: WAL0018-ID-2001; Outdoor unit: WAL0019-OD-3001

2 Order

2.1 Date of Purchase Order, Customer's Reference

2022-09-19, Zhongshan Amitime Electric Co., LTD

2.2 Test Sample(s)

- Reception date(s): 2022-09-20,
- Location(s) of reception:

For Energy test:

Guangzhou Lingxin Technology Co., LTD

Address: Room 101, Building 2, No.13 west Route, Kengtou Industrial Zone, Nancun Town, Panyu District, Guangzhou

For Noise tests:

CVC Testing Technology Co., Ltd.

Address: No.3, Tiantaiyi Road, Kaitai Avenue, Science City, Guangzhou, Guangdong, 510663, P.R.China

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

2.3 Date(s) of Testing

2022-09-20 to 2022-10-21

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 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 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 Air to Water Heat Pump 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 5-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

Doc No.: ITC-TTW0902.02E – Rev.11

Appendix I Test results

Table 1.	Heating mode(Low temperature application):						P	
Model	Indoor unit: PEVH-45V4DEA/IA; Outdoor unit: PEVH-45V4DEA							
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 / 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 35367.01 W, the power is 8753.49W, the COP is 4.04W/W.								
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	2:10:00	4:00:00	2:10:00	2:10:00	2:10:00	2:10:00	
The heat pump defrosts	--	No	Yes	No	No	No	No	
Complete Cycles	--	0	1	0	0	0	0	
Barometric pressure	kPa	101.02	101.01	101.01	101.02	101.01	101.02	
Voltage	V	397.4	397.7	399.1	398.3	398.3	397.4	
Current input of the unit	A	0.00	9.15	6.12	5.61	18.56	18.65	
Power input of the unit	kW	0.000	4.448	2.827	2.559	9.861	9.916	
Test conditions indoor unit								
Inlet Water temperature, DB	°C	29.86	27.31	24.63	21.40	31.53	29.86	
Outlet Water temperature, DB	°C	33.98	30.02	26.96	23.95	35.29	33.98	

Doc No.: ITC-TTW0902.02E – Rev.11



Appendix I Test results

Test conditions outdoor unit							
Air inlet temperature, DB	°C	-7.00	2.01	7.02	12.01	-10.00	-7.00
Air inlet temperature, WB	°C	-7.01	1.03	6.01	11.00	-10.92	-7.01
Summary of the results							
Total heating capacity		0.000	18.961	16.247	17.838	26.128	28.715
Effective power input	kW		4.679	3.057	2.789	10.091	10.146
Coefficient of performance (COP)	--	2.83	4.05	5.31	6.40	2.59	2.83
Compressor frequency	Hz	85	45	30	30	85	85
Water flow	m ³ /h	6.00	6.00	6.00	6.00	6.00	6.00
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)	32.460	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	32.460	26.128	2.59	0.00	1.00	2.59	
F	28.715	28.715	2.83	0.00	1.00	2.83	
A	28.715	28.715	2.83	0.00	1.00	2.83	
B	17.479	18.961	4.05	0.00	0.92	4.05	
C	11.236	16.247	5.31	0.99	0.69	5.29	
D	4.994	17.838	6.40	0.99	0.28	6.23	
CR: part load divided by capacity;							

Doc No.: ITC-TTW0902.02E -- Rev.11



Appendix I Test results

Electric power consumptions	Unit	Value
Thermostat-off mode [P_{TO}]	kW	0.012
Standby mode [P_{SB}]	kW	0.012
Crankcase heater [P_{CK}]	kW	0.036
Off mode [P_{OFF}]	kW	0.012

Conclusions:	Unit	Value
SCOP _{on} :	kWh/kWh	4.18
SCOP:	kWh/kWh	4.17
Q_H :	kWh/year	67063
Q_{HE} :	kWh/year	16064
$\eta_{s,h}$	%	164.0
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: PEVH-45V4DEA/IA; Outdoor unit: PEVH-45V4DEA							
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	$(T_{bivalent-16})/(T_{designh-16})$				Tbiv	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 33291.87 W, the power is 11762.04W, the COP is 2.83W/W.								
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	2:10:00	2:10:00	2:10:00	2:10:00	2:10:00	2:10:00	
The heat pump defrosts	--	No	No	No	No	No	No	
Complete Cycles	--	0	0	0	0	0	0	
Barometric pressure	kPa	99.85	99.85	99.85	99.80	99.75	99.85	
Voltage	V	397.1	398.3	398.6	398.7	397.1	397.1	
Current input of the unit	A	0.00	10.50	6.62	5.52	27.37	26.23	
Power input of the unit	kW	0.000	5.498	3.262	2.659	16.761	15.945	
Test conditions indoor unit								
Inlet Water temperature, DB	°C	44.36	37.40	32.10	25.49	47.88	44.36	
Outlet Water temperature, DB	°C	52.14	42.07	36.03	29.98	55.24	52.14	

Doc No.: ITC-TTW0902.02E -- Rev.11

Appendix I Test results

Test conditions outdoor unit							
Air inlet temperature, DB	°C	-6.99	2.01	7.00	12.00	-10.00	-6.99
Air inlet temperature, WB	°C	-7.82	0.99	6.00	11.00	-10.66	-7.82
Summary of the results							
Total heating capacity		0.000	19.980	16.866	19.298	31.297	33.148
Effective power input	kW		5.632	3.395	2.792	16.894	16.078
Coefficient of performance (COP)	--	2.06	3.55	4.97	6.91	1.85	2.06
Compressor frequency	Hz	95	41	30	30	95	95
Water flow	m³/h	3.70	3.70	3.70	3.70	3.70	3.70
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)	37.472	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	37.472	31.297	1.85	0.00	1.00	1.85	
F	33.148	33.148	2.06	0.00	1.00	2.06	
A	33.148	33.148	2.06	0.00	1.00	2.06	
B	20.177	19.980	3.55	0.00	1.00	3.55	
C	12.971	16.866	4.97	0.99	0.77	4.95	
D	5.765	19.298	6.91	0.99	0.30	6.75	
CR: part load divided by capacity;							

Doc No.: ITC-TTW0902.02E – Rev.11

Appendix I Test results

Electric power consumptions	Unit	Value
Thermostat-off mode [P_{TO}]	kW	0.012
Standby mode [P_{SB}]	kW	0.012
Crankcase heater [P_{CK}]	kW	0.036
Off mode [P_{OFF}]	kW	0.012

Conclusions:	Unit	Value
SCOP _{on} :	kWh/kWh	3.62
SCOP:	kWh/kWh	3.61
Q_H :	kWh/year	77416
Q_{HE} :	kWh/year	21419
$\eta_{s,h}$	%	141.6
Seasonal space heating energy efficiency classes: (According (EU) No 811/2013 Table 1)	--	A++

Appendix I Test results

Table 3. Clause 4 of EN 14511-4:2018					P
Customer Code	Execution Date [dd-mm-yyyy]	Testing item	Standard Reference	Comment	Test Response
TEST 1	13-10-2022		EN14511-4:2018, §4.2.1.2 Table 3	The "lower" starting operating conditions declared by the manufacturer for the heating mode- i.e. Tair=-25.34°C, T out water 7.21°C, Flow rate 4.80m 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 allarm. During the test the machine operated in automode. No damage was recorded on the machine during and after the test.	Passed
TEST 2	13-10-2022	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. Tair=-24.80°C, T out water 56.80°C, Flow rate 4.80m 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	13-10-2022	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	13-10-2022	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	13-10-2022	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

Doc No.: ITC-TT0902.02E – Rev.11

Appendix I Test results

Table 4a.	Sound power level measurement(Low temperature application)		P
Model	Indoor unit: PEVH-45V4DEA/IA; Outdoor unit: PEVH-45V4DEA		
	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):	400	
	Frequency (Hz):	50	
	Working condition class :	Class A	
	Acoustical environment :	Hemi-anechoic room	
	Windshield type :	Sponge	
	Measured position amount :	14	
	Water flow (m³/h):	6.00	
	Measured quantity	L_{WA,indoors} (dB(A))	L_{WA,outdoors} (dB(A))
	Sound pressure level $\bar{L}_{p(ST)}$ ****	19	55
	Spheres radius d *	1.0m	1.0m
	Sound power level L _{WA} ****	32	71
Setting of controls: according to user manual. Duct connection:-- Rounding to: *) 1 decimal places; **) 2 decimal places; ***) 3 decimal places; ****) nearest integer Fan speed: 600 r/min, compressor speed: 65Hz.			

Appendix I Test results

Table 4b.	Sound power level measurement(Medium temperature application)		P
Model	Indoor unit: PEVH-45V4DEA/IA; Outdoor unit: PEVH-45V4DEA		
	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):	400	
	Frequency (Hz):	50	
	Working condition class :	Class A	
	Acoustical environment :	Hemi-anechoic room	
	Windshield type :	Sponge	
	Measured position amount :	14	
	Water flow (m³/h):	3.70	
	Measured quantity	L_{WA,indoors} (dB(A))	L_{WA,outdoors} (dB(A))
	Sound pressure level $\bar{L}_{p(ST)}$ ****	19	56
	Spheres radius d *	1.0m	1.0m
	Sound power level L _{WA} ****	32	72
Setting of controls: according to user manual. Duct connection:-- Rounding to: *) 1 decimal places; **) 2 decimal places; ***) 3 decimal places; ****) nearest integer Fan speed: 600 r/min, compressor speed: 65Hz.			

Appendix II Marking plate

Nameplate

Indoor unit: PEVH-45V4DEA/IA



AMITIME[®]

DC Inverter Type Air To Water Unit

Model Number:	PEVH-45V4DEA/IA
Source type:	Air - Water
Power supply:	220-240V~/50Hz
Fuse Indoor unit:	10 A/C
Operating range (outdoor):	-25 - 45°C
Max. heat pump water temp:	58°C
Max. system water temp:	75°C
Sound power level LWA:	0 dB(A)
Weight w/o packaging:	10 kg
Rated Input Power-Cooling:	  11640 W
Rated Input Power-Heating:	  14308 W
Electrical Shockproof:	Class I

For indoor use only. Installation & service by licensed mechanic only.

Installation and operation only in according to the manufacturer's instructions.

Serial Nr: WAL0018-ID-2001






Zhongshan Amitime Electric Co.,LTD.
5th Yandong Rd, Dayan Industrial Zone, Huangpu Town, 528429
Zhongshan City,Guangdong, CHINA.

Remark: -

Doc No.: ITC-TTW0902.02E – Rev.11

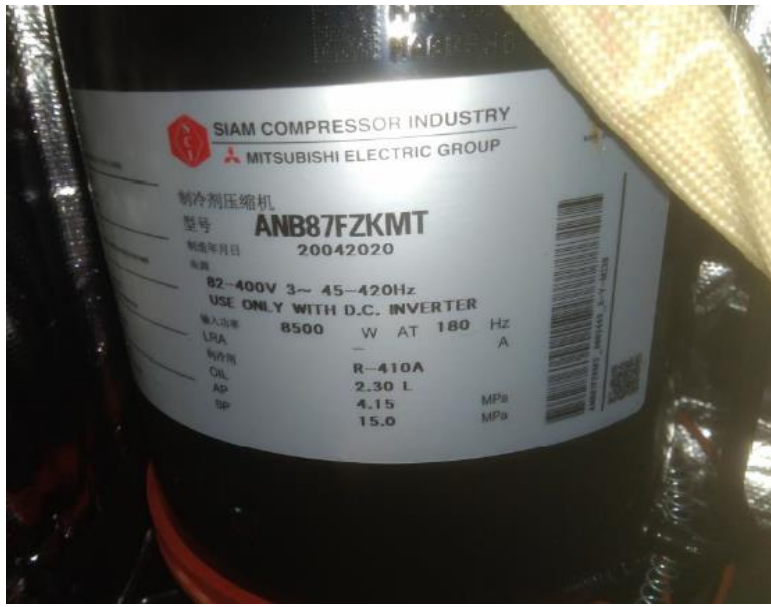
Appendix II Marking plate

Nameplate	
Outdoor unit: PEVH-45V4DEA	
	
DC Inverter Type Air To Water Unit	
	O:WAL0019
Model Number:	PEVH-45V4DEA
Input Voltage:	380-415V,3N~/50Hz
Input Power-Cooling:	3529-11640 W
Input Power-Heating:	4156-14308 W
Min.Circuit Ampacity:	10 A
Circuit Breaker:	60 A
Cooling Capacity:	11482-29933 W
Heating Capacity:	13673-43240 W
Rated Input Power-Cooling:	11640 W
Rated Input Power-Heating:	14308 W
Operation pressure (low side):	1.2MPa
Operation pressure (high side):	4.2MPa
Max allowable pressure:	4.2MPa
Refrigerant:	R410A / 8000g
Max EER Cooling:	3.3 W/W
Max COP Heating:	4.39 W/W
Water Flow:	7.8 m3/h
Net Weight:	300 kg
Moisture Resistance:	IPX4
Electrical Shockproof:	Class I
For outdoor use only. Installation & service by licensed mechanic only.	
	
Contains fluorinated greenhouse gases covered by the Kyoto protocol.	
GWP:2088: 16.70 tonnes CO2 equivalent.	
Hermetically sealed. WAL0019-OD-3001	
	
Zhongshan Amitime Electric Co.,LTD.	
5th Yandong Rd, Dayan Industrial Zone, Huangpu Town, 528429 Zhongshan City,Guangdong, CHINA.	
Remark: -	

Doc No.: ITC-TTW0902.02E – Rev.11


Appendix III photo documentaiton

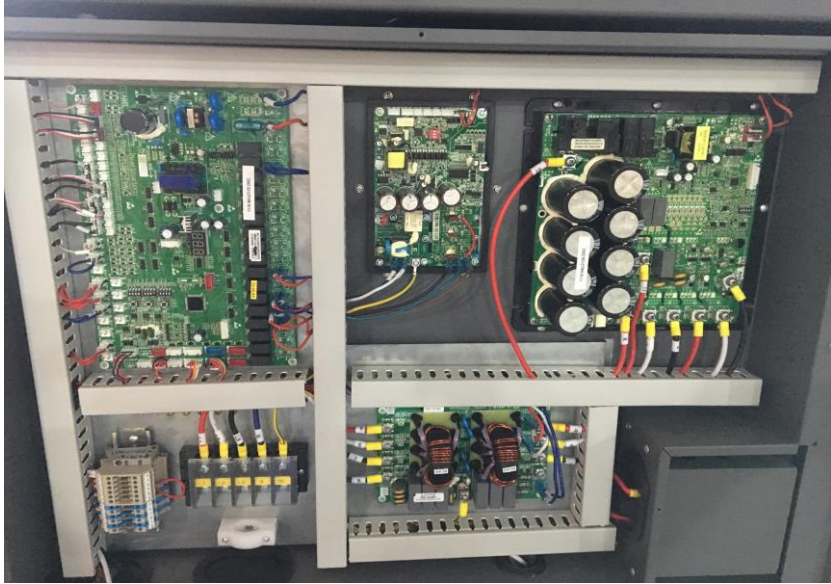
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View:	
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<input type="checkbox"/> Right	
<input type="checkbox"/> Left	
<input type="checkbox"/> Top	
<input type="checkbox"/> Bottom	

Details of:	Compressor
View:	
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<input type="checkbox"/> Rear	
<input type="checkbox"/> Right	
<input type="checkbox"/> Left	
<input type="checkbox"/> Top	
<input type="checkbox"/> Bottom	

Doc No.: ITC-TTW0902.02E – Rev.1.1


Appendix III photo documentaiton

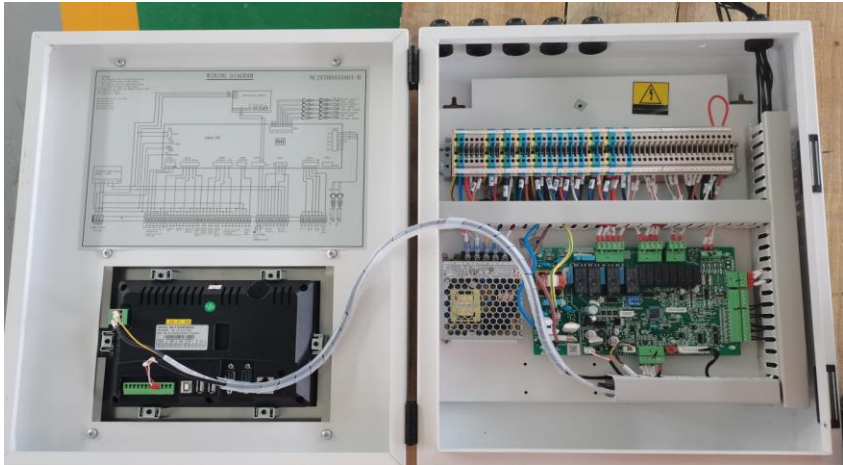
Details of:	Fan Motor
View:	
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<input type="checkbox"/> Right	
<input type="checkbox"/> Left	
<input type="checkbox"/> Top	
<input type="checkbox"/> Bottom	

Details of:	Main Control Board for PEVH-45V4DEA
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	

Doc No.: ITC-TTW0902.02E – Rev. 11

Appendix III photo documentaiton

Details of:	Indoor unit: PEVH-45V4DEA/IA
<p>View:</p> <p><input type="checkbox"/> General</p> <p><input type="checkbox"/> Front</p> <p><input type="checkbox"/> Rear</p> <p><input type="checkbox"/> Right</p> <p><input type="checkbox"/> Left</p> <p><input type="checkbox"/> Top</p> <p><input type="checkbox"/> Bottom</p>	

Details of:	Main Board for PEVH-45V4DEA/IA
<p>View:</p> <p><input type="checkbox"/> General</p> <p><input type="checkbox"/> Front</p> <p><input type="checkbox"/> Rear</p> <p><input type="checkbox"/> Right</p> <p><input type="checkbox"/> Left</p> <p><input type="checkbox"/> Top</p> <p><input type="checkbox"/> Bottom</p>	

Doc No.: ITC-TTW0902.02E – Rev.1.1

Appendix IV Construction data form

Part		Technical data
1. Compressor		
	Manufacture:	SIAM COMPRESS OR INDUSTRY CO..LTD.
	Zhongshan Amitime Electric	ANB87FZKMT
	Rated capacity:	8500W
	Serial-number:	ANB87FZKMT_0002453_0-Y-M230
	Specification:	82-400V; 3N~;45-420Hz;R410A
2. Condenser		
	Manufacture:	Gimleo Heat Exchanger Co..Ltd.
	Type:	GAS15
	Heat exchanger:	Efficient tank
	Dimension (mm):	450(W)mm*387.7(D)mm*655.7(H)mm
3. Evaporator		
	Manufacture:	Foshan Huize Heat Exchanger Equipment Co., LTD
	Type:	PEVH-45V4DA-02
	Heat exchanger:	Finned heat exchanger
	Dimension (mm):	969(W)mm*1028.5(D)mm*1218(H)mm
4. Fan motor		
	Manufacture:	Zhejiang Kemao Intelligent Electromechanical Inc.
	Type:	ODS760C-190B4.EC.V-01B(ME100S-1.1)
	Fan type:	4 blades
	Specification:	DC 310V;950 r/min;1.1kw;8P;50Hz
5. Main control board		
	Manufacture:	Hangzhou Leaderway Electronics Co.,Ltd.
	Type:	HMM4W-11A01
	Specification:	220-240V; 50Hz;

Appendix V Equipment List

No.	Type	Manufacture	Model	Equipment ID	Calibration Due Date
1	Digital power meter	YOKOGAWA	WT230	91HC39024	2023-01-04
2	Platinum resistance	CHINO	Pt100	TS-019XC0130	2023-01-04
3	Platinum resistance	CHINO	Pt100	TS3XA0248	2023-01-04
4	Temperature and humidity sensor	YOKOGAWA	HMD62	S4610294	2023-01-04
5	Water pressure gauge	YOKOGAWA	MPM489	B86832	2023-01-04
6	Water pressure gauge	YOKOGAWA	MPM489	B86833	2023-01-04
7	Flowmeter	YOKOGAWA	AXG032	S5W920561039	2023-01-04
8	Anechoic rooms (hemi-anechoic rooms)	Guangzhou Kinte	-	NC-036-2	2023-10-07
9	AC source Supply	YANGHONG	YF-3600	VGDS-0637	2022-11-07
10	6 channel data logger	—	PXI-1033	VG DY-0257	2023-05-20
11	PULSE system	B & K	3660C	VG DY-0184	2023-04-12
12	Calibrator	B & K	4231	HJ-000095	2023-06-30
13	Long steel tape	—	5m	HJ-000150	2023-01-01
14	Temperature measurement system	—	—	NC-036-1	2023-06-07
15	Atmospheric pressure meter	—	—	HJ-000165	2022-11-22
16	Constant temperature water system	B & K	—	VGDS-0448	2023-04-18
17	Windscreen	B & K	WS002-5	—	—

-- End of Report --