

Technical Report No.: 64.181.24.00376.01 Rev.00

Date: 2024-03-20

Client:	Name:	EcoFlow Inc.
	Address:	RM 401, Plant #1, Runheng Industrial Zone, Fuyuan Road, Zhancheng Community, Fuhai Street, Bao'an District, Shenzhen City, Guangdong Province, P.R.China
	Contact person:	Molly Li
Manufacturer:	Name:	EcoFlow Inc.
	Address:	RM 401, Plant #1, Runheng Industrial Zone, Fuyuan Road, Zhancheng Community, Fuhai Street, Bao'an District, Shenzhen City, Guangdong Province, P.R.China
Factory:	Name:	Guangdong New Energy Technology Development Co., Ltd.
	Address:	NO.125, Chuangyou Road, Xintang Town, Zengcheng, 511340 Guangzhou, Guangdong, PEOPLE'S REPUBLIC OF CHINA
Test object:	Product:	AIR TO WATER HEAT PUMP
	Model:	EF AD-P3-20K-S1

Trade mark:



Test specification:	☒	EN 14825:2022
	☒	EN 14511-3:2022
	☒	EN 12102-1:2022
	☒	EN 14511-4:2022 Clause 4

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.

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 :	EF AD-P3-20K-S1
Rated Voltage (V) :	380-415V, 3N~
Rated Frequency (Hz) :	50
Rated Power (W) :	6800
Rated Current (A) :	11.6
Protection Class :	Class I
Protection Against Moisture :	IP X4
Construction :	Stationary
Supply connection :	☐ Non detachable cord ☒ Permanent connection to fixed wiring
Operation mode:	☒ Continuous operation; ☐ Intermittent operation; ☐ Short time operation;
Refrigerant/charge (kg) :	R290 / 1.65kg
Declared parameters :	☒ Average ☐ Warmer ☐ Colder
Sound power level dB(A) :	N/A
Series No :	212301040074030050006

2 Order

2.1 Date of Purchase Order, Customer's Reference

Date of Purchase Order: 2022-12-07, 2023-06-02, 2024-03-20

Customer's Reference: EcoFlow Inc.

2.2 Test Sample(s)

- Reception date(s): 2023-02-10, 2023-06-02

- Location(s) of reception:

For Energy test:

Guangzhou Customs District Technology Center

Address: No.3, Desheng East Road, Daliang, Shunde District, Foshan, Guangdong, China

For Noise tests:

CVC Testing Technology Co., Ltd.

Address: No.3, Tiantai Yilu, Kaitai Avenue, Science City, Guangzhou, Guangdong, China

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

2.3 Date(s) of Testing

2023-02-10 to 2023-03-20, 2023-06-02 to 2023-06-12

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

☒ 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.

3.1 Positive Test Results

See Appendix I

4 Remarks

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

6 Test History

- 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 14825:2022.
- 5) This test report 64.181.24.00376.01 Rev.00, dated 2024-03-20 bases on original test report 64.181.22.04501.02 Rev.00, dated 2023-07-05 to include the following changes and/or additions, which were considered technical modifications:
 - a) Changing report holder name and address, manufacturer name and address, trademark, model name and appearance.
 - b) After evaluating, no additional test was needed.

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



Appendix I Test results

Table 1.	Heating mode (Low temperature application):							P
Model	EF AD-P3-20K-S1							
Product type	Air to Water	Heating season	☒	Average	☐	Warmer	☐	Colder
1. Test conditions:								
Condition	Part Load Ratio in %			Outdoor heat exchanger		Indoor heat exchanger		
	Formula		Average climates	Inlet dry (wet) bulb temperature (°C)		Inlet/outlet water temperatures (°C)		
A	(-7-16)/(Tdesignh-16)		88	-7(-8)		a / 34		
B	(+2-16)/ (Tdesignh-16)		54	2(1)		a / 30		
C	(+7-16)/(Tdesignh-16)		35	7(6)		a / 27		
D	(+12-16)/(Tdesignh-16)		15	12(11)		a / 24		
E	(TOL-16)/ (Tdesignh-16)			TOL		a / 35.3		
F	(Tbivalent-16)/(Tdesignh-16)			Tbiv		a / 34		
G	(-15-16)/(Tdesignh-16)		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 19.120kW, the power is 4.500kW, the COP is 4.25kW/kW.								
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	1:10:00	1:10:00	1:10:00	1:10:00	1:10:00	1:10:00	
The heat pump defrosts	--	No	No	No	No	No	No	
Electrical Properties								
Voltage	V	400.6	399.9	399.8	397.9	400.4	400.6	
Current input of the unit	A	6.75	2.99	1.59	1.17	7.92	6.75	
Power input of the unit	kW	4.446	1.900	0.982	0.697	5.189	4.446	
Compressor frequency	Hz	80	36	24	20	90	80	

Appendix I Test results

Test conditions User Side							
Water flow	m³/h	3.33	3.33	3.33	3.33	3.33	3.33
Inlet Water temperature	°C	30.63	27.96	25.67	23.40	31.86	30.63
Outlet Water temperature	°C	34.00	30.06	27.20	24.90	35.35	34.00
Test conditions Source Side							
Barometric pressure	kPa	101.02	101.01	101.01	101.02	101.01	101.02
Air inlet temperature, DB	°C	-7.00	2.01	7.01	12.00	-10.00	-7.00
Air inlet temperature, WB	°C	-8.00	0.87	6.01	11.00	-11.00	-8.00
Summary of the results							
Total heating capacity	kW	12.986	8.100	5.896	5.773	13.505	12.986
Effective power input	kW	4.392	1.846	0.929	0.643	5.136	4.392
Coefficient of performance (COP)	kW/kW	2.96	4.39	6.35	8.97	2.63	2.96
Remark: -							

Electric power consumptions	Unit	Value
Thermostat-off mode [P _{TO}]	kW	0.017
Standby mode [P _{SB}]	kW	0.014
Crankcase heater [P _{CK}]	kW	0.039
Off mode [P _{OFF}]	kW	0.014

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Appendix I Test results

3.Calculation/conclusion for SCOP:						
Tdesignh(°C):	-10		Tbiv(°C) :	-7		
Pdesignh(kW):	14.680		TOL(°C) :	-10		
Test result A, B, C, D, E, F conditions:						
Condition	Part load	Measured capacity	Measured COP	Cdh	CR	COP at part load
E	14.680	13.505	2.63	0.90	1.00	2.63
F	12.986	12.986	2.96	0.90	1.00	2.96
A	12.986	12.986	2.96	0.90	1.00	2.96
B	7.904	8.100	4.39	0.90	0.98	4.39
C	5.081	5.896	6.35	0.90	0.86	6.25
D	2.258	5.773	8.97	0.90	0.39	7.76
CR: part load divided by capacity;						

Conclusions:	Unit	Value
SCOPon:	kWh/kWh	4.64
SCOP:	kWh/kWh	4.63
QH:	kWh/year	30328
QHE:	kWh/year	6548
$\eta_{s,h}$	%	182.3
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	EF AD-P3-20K-S1							
Product type	Air to Water	Heating season	☒	Average	☐	Warmer	☐	Colder
1. Test conditions:								
Condition	Part Load Ratio in %			Outdoor heat exchanger		Indoor heat exchanger		
	Formula		Average climates	Inlet dry (wet) bulb temperature (°C)		Inlet/outlet water temperatures (°C)		
A	(-7-16)/(Tdesignh-16)		88	-7(-8)		a / 52		
B	(+2-16)/ (Tdesignh-16)		54	2(1)		a / 42		
C	(+7-16)/(Tdesignh-16)		35	7(6)		a / 36		
D	(+12-16)/(Tdesignh-16)		15	12(11)		a / 30		
E	(TOL-16)/ (Tdesignh-16)			TOL		a / 55.3		
F	(Tbivalent-16)/(Tdesignh-16)			Tbiv		a / 52		
G	(-15-16)/(Tdesignh-16)		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 18.309kW, the power is 6.386kW, the COP is 2.87kW/kW.								
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	1:10:00	1:10:00	1:10:00	1:10:00	1:10:00	1:10:00	
The heat pump defrosts	--	No	No	No	No	No	No	
Electrical Properties								
Voltage	V	400.7	400.9	399.8	397.8	400.8	400.7	
Current input of the unit	A	8.81	3.59	1.90	1.35	10.76	8.81	
Power input of the unit	kW	5.714	2.344	1.238	0.826	6.847	5.714	
Compressor frequency	Hz	80	38	24	20	90	80	

Appendix I Test results

Test conditions User Side							
Water flow	m³/h	1.97	1.97	1.97	1.97	1.97	1.97
Inlet Water temperature	°C	46.64	38.62	33.89	29.05	49.31	46.64
Outlet Water temperature	°C	52.03	42.01	36.35	31.52	55.00	52.03
Test conditions Source Side							
Barometric pressure	kPa	99.85	99.85	99.85	99.80	99.75	99.85
Air inlet temperature, DB	°C	-7.00	2.00	7.01	12.00	-10.00	-7.00
Air inlet temperature, WB	°C	-8.00	1.06	6.00	11.00	-11.00	-8.00
Summary of the results							
Total heating capacity	kW	12.330	7.742	5.591	5.619	13.000	12.330
Effective power input	kW	5.680	2.310	1.203	0.792	6.812	5.680
Coefficient of performance (COP)	kW/kW	2.17	3.35	4.65	7.10	1.91	2.17
Remark: -							

Electric power consumptions	Unit	Value
Thermostat-off mode [P _{TO}]	kW	0.017
Standby mode [P _{SB}]	kW	0.014
Crankcase heater [P _{CK}]	kW	0.039
Off mode [P _{OFF}]	kW	0.014

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Appendix I Test results

3.Calculation/conclusion for SCOP:						
Tdesignh(°C):	-10	Tbiv(°C) :	-7			
Pdesignh(kW):	13.938	TOL(°C) :	-10			
Test result A, B, C, D, E, F conditions:						
Condition	Part load	Measured capacity	Measured COP	Cdh	CR	COP at part load
E	13.938	13.000	1.91	0.90	1.00	1.91
F	12.330	12.330	2.17	0.90	1.00	2.17
A	12.330	12.330	2.17	0.90	1.00	2.17
B	7.505	7.742	3.35	0.90	0.97	3.35
C	4.825	5.591	4.65	0.90	0.86	4.57
D	2.144	5.619	7.10	0.90	0.38	6.11
CR: part load divided by capacity;						

Conclusions:	Unit	Value
SCOPon:	kWh/kWh	3.49
SCOP:	kWh/kWh	3.49
Q _H :	kWh/year	28796
Q _{HE} :	kWh/year	8254
η _{s,h}	%	136.5
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	EF AD-P3-20K-S1		
	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	
Measured quantity	L _{WA,indoors} (dB(A))	L _{WA,outdoors} (dB(A))	Remark
Sound pressure level `L _{p(ST)} ****	--	55	--
Measurement distance d *	--	1.0m	--
Sound power level L _{WA} ****	--	70	--
Setting of controls: according to user manual.			
Duct connection:--			
Rounding to: *) 1 decimal places; **) 2 decimal places; ***) 3 decimal places; ****) nearest integer			

Appendix I Test results

Table 3b.	Sound power level measurement (Medium temperature application)		P
Model	EF AD-P3-20K-S1		
	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	
Measured quantity	L _{WA,indoors} (dB(A))	L _{WA,outdoors} (dB(A))	Remark
Sound pressure level $L_{p(ST)}$ ****	--	56	--
Measurement distance d *	--	1.0m	--
Sound power level L _{WA} ****	--	72	--
Setting of controls: according to user manual.			
Duct connection:--			
Rounding to: *) 1 decimal places; **) 2 decimal places; ***) 3 decimal places; ****) nearest integer			

Appendix I Test results

Table 4.	Clause 4 of EN 14511-4:2022	P
Model:	EF AD-P3-20K-S1	
TEST 1	STARTING TEST (§4.2.1.2 Table 3)	
Requirement: The "lower" starting operating conditions declared by the manufacturer for the heating mode- i.e. T _{air} = -25.05 °C, T _{out water} = 12.15 °C, Flow rate 1.95 m³/h have been set and obtained. At those conditions, the machine was switched on.		
Observation/ Evaluation: It started without any problem and worked for 30 minutes without showing any warning or alarm. During the test the machine operated in auto mode. No damage was recorded on the machine during and after the test.		
Test Response: Pass		

TEST 2	OPERATING TEST (§4.2.1.2 Table 3)
Requirement: 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} = -25.22 °C, T _{out water} = 75.15 °C, Flow rate 1.95 m³/h. Once these conditions were obtained, the machine was let operate for over 1 hour in auto mode.	
Observation/ Evaluation: During the test, no warning or alarm were showed. No damage was recorded on the machine during and after the test.	
Test Response: Pass	

TEST 3	SHUTTING OFF WATER FLOW (§ 4.5)
Requirement: 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.	
Observation/ Evaluation: 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.	
Test Response: Pass	

TEST 4	SHUTTING OFF AIR FLOW (§ 4.5)
Requirement: 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.	
Observation/ Evaluation: During the test, no waring or alarm were showed. No damage was recorded on the machine during and after the test.	
Test Response: Pass	

TEST 5	COMPLETE POWER SUPPLY FAILURE (§ 4.6)
Requirement: The power supply was cut off for about 5 seconds.	
Observation/ Evaluation: The unit restarted automatically within about 3 minutes after the power supply was reactivated.	
Test Response: Pass	

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Appendix II Marking plate

Nameplate

Model: EF AD-P3-20K-S1

EcoFlow PowerHeat Air-to-water Heat Pump

Model/Modell	EF AD-P3-20K-S1
Power Supply/Spannungsversorgung	380-415V / 3N~ / 50Hz
Heating Capacity ₁ (kW)/Heizleistung ₁ (kW)	6.70-20.36
Input Power ₁ (kW)/Eingangsleistung ₁ (kW)	1.12-4.62
Cooling Capacity ₂ (kW)/Kühlleistung ₂ (kW)	4.40-14.40
Input Power ₂ (kW)/Eingangsleistung ₂ (kW)	0.95-4.69
Rated Input Power (kW)/Nenneingangsleistung (kW)	6.8
Rated Running Current (A)/Nennbetriebsstrom (A)	11.6
Rated Water Flow (m³/h)/Nenn-Wasserdurchflussrate (m³/h)	3.44
Refrigerant Type/Filling Weight (kg) / Kältemitteltyp/Füllgewicht (kg)	R290 / 1.65
Net Weight (kg)/Nettogewicht (kg)	186
Net Dimensions (L x W x H) (mm)/Abmessungen (L x B x M) (mm)	1263 x 440 x 1375
Water Proof Class/IP-Schutzklasse	IPX4
Protection Class against Electric Shock/Schutzklasse gegen elektrischen Schlag	I
Max./Min. Refrigerant Pressure (MPa) / Max./Min. Kältemitteldruck (MPa)	3.0 / 0.9
Storage Refrigerant Pressure Range (Mpa)/Druckbereich des Kältemittels bei der Lagerung (Mpa)	3.5

1. [Space Heating] Ambient Temp. (DB / WB):7°C / 6°C;
Water Temp. (Inlet / Outlet):30°C / 35°C

2. [Space Cooling] Ambient Temp. (DB / WB):35°C / -;
Water Temp.(Inlet / Outlet):12°C / 7°C

1. [Raumheizung] Umgebungstemp. (DB / WB):7°C / 6°C;
Wassertemp. (Eintritt / Austritt):30°C / 35°C

2. [Raumkühlung] Umgebungstemp. (DB / WB):35°C / -;
Wassertemp. (Eintritt / Austritt):12°C / 7°C

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UK REP
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41 Devonshire Street Ground Floor Office 1London United Kingdom
W1G 7AJ

Manufacturer: EcoFlow Inc.
RM 401, Plant #1, Runheng Industrial Zone, Fuyuanl Road, Zhancheng
Community, Fuhai Street, Bao'an District, Shenzhen City, Guangdong
Province, P.R. China

Hotline Number/Hotline Nummer: -DE: 0800 0002566
-AT: 0800 018 036
-UK: 0808 8126 006

Cet appareil, ses accessoires et câbles de raccordement doivent être installés conformément aux instructions de l'utilisateur.

Questo apparecchio, i suoi accessori e i cavi di collegamento devono essere installati secondo le istruzioni dell'utente.

Raccogli la plastica

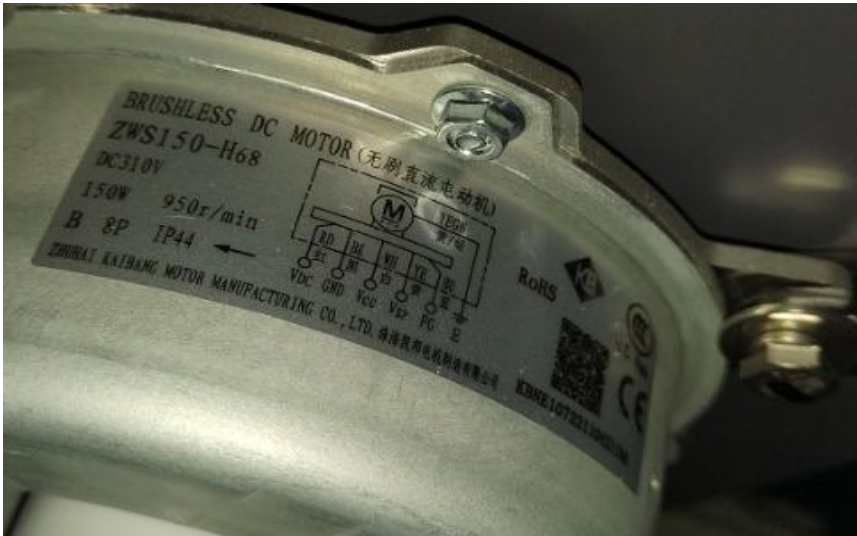
Doc No.: ITC-TTW0902.02E – Rev.13

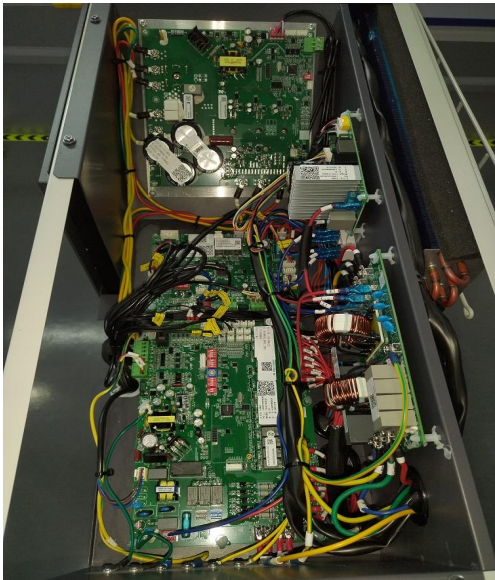
Appendix III photo documentation

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

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

Appendix III photo documentation

Details of:	Fan Motor
View:	 The image shows a close-up of a brushless DC motor. The label on the motor provides the following information: BRUSHLESS DC MOTOR (无刷直流电动机) ZWS150-H68 DC310V 150W 950r/min B 8P IP44 ZHONGTAI KAIJIANG MOTOR MANUFACTURING CO., LTD. 台湾凯强电机制造有限公司 RoHS and CE compliance marks. QR Code with the number KRNE107231300100. Wiring Diagram: Shows a motor symbol 'M' connected to a 3-phase supply (R, S, T) and a neutral point (N). The motor terminals are labeled: RD (R), BL (S), BL (T), VE (N), VE (R), VE (S), VE (T), VE (N), VE (R), VE (S), VE (T), VE (N).
☐ General ☐ Front ☐ Rear ☐ Right ☐ Left ☐ Top ☐ Bottom	

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

Appendix III photo documentation

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

Appendix IV Construction data form

Model: <u>EF AD-P3-20K-S1</u>		
Part		Technical data
1. Compressor		
	Manufacture:	Shanghai Highly Electrical Appliances Co.,Ltd
	Type:	WHP32900VSKTQ9JK
	Rated capacity:	4260W
	Serial-number:	W82N1E02NMNJ
	Specification:	DC221V; R290
2. Condenser		
	Manufacture:	Guangzhou Panyu Xinsuneng Board Heat Exchanger Co., Ltd.
	Type:	MTB090HP-47-Q
	Heat exchanger:	Plate heat exchanger
	Dimension(mm):	541.8mm×126.6mm×94mm
3. Evaporator		
	Manufacture:	Guangzhou Aotai Refrigeration Equipment Co., Ltd.
	Type:	NE-F200HCR4TINVM-SD+
	Heat exchanger:	Fin heat exchanger
	Dimension(mm):	25mm×21.65mm×1.8mm×2
4. Fan motor		
	Manufacture:	Zhuhai Kaibang Motor Manufacture Co.,Ltd
	Type:	ZWS150-H68
	Fan type:	4 blade
	Specification:	DC310V; 150W
5. Main control board		
	Manufacture:	Guangzhou Pulp Electronic Co., Ltd.
	Type:	K.LK050085A.01
	Specification:	220-240V~/50Hz
6. Water pump		
	Manufacture:	Hefei Xinhua Canned Motor Pump Co.,Ltd.
	Type:	GPA25-11H
	Specification:	230VAC; 50Hz; 140W

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Appendix V Equipment List

No.	Type	Manufacture	Model	Equipment ID	Calibration Due Date
1	Heat pump energy efficiency testing system	PINXIN	10HP	2017J00001	2023-11-24
2	Electromagnetic flowmeter	KROHNE	OPTIFLUX4100C	H17221264	2023-12-21
3	Anechoic rooms (hemi-anechoic rooms)	Guangzhou Kinte	-	NC-036-2	2023-10-07
4	AC source Supply	YANGHONG	YF-3600	VGDS-0637	2023-11-07
5	6 channel data logger	—	PXI-1033	VG DY-0257	2024-05-20
6	PULSE system	B & K	3660C	VG DY-0184	2024-04-12
7	Calibrator	B & K	4231	HJ-000095	2024-06-30
8	Long steel tape	—	5m	HJ-000150	2024-01-01
9	Temperature measurement system	—	—	NC-036-1	2024-06-07
10	Atmospheric pressure meter	—	—	HJ-000165	2023-11-22
11	Constant temperature water system	B & K	—	VGDS-0448	2024-04-18
12	Windscreen	B & K	WS002-5	—	—

-- End of Report --