

Nantong Ningpu Electrical Appliance Co.,Ltd

TEST REPORT

SCOPE OF WORK

ENERGY EFFICIENCY TESTING - PORTABLE AIR CONDITIONER - [MODEL(S) LIST IN PAGE 2]

REPORT NUMBER

221107089GZU-007

ISSUE DATE [REVISED DATE]
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11

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Report No. 221107089GZU-007

Testing Laboratory: Intertek Testing Services Shenzhen Ltd. Guangzhou Branch Address: Room 02, & 101/E201/E301/E401/E501/E601/E701/E801 of

Room 01 1-8/F., No. 7-2. Caipin Road, Science City, GETDD,

Guangzhou, Guangdong, China

Applicant: Nantong Ningpu Electrical Appliance Co.,Ltd

Address: No.139, Huanghe Road, Rudong Economic Development

Zone, Nantong, Jiangsu Province, China

Manufacturing site: Nantong Ningpu Electrical Appliance Co.,Ltd

Address: No.139, Huanghe Road, Rudong Economic Development

Zone, Nantong, Jiangsu Province, China

Testing Location: Same as Testing Laboratory

Address: Same as Testing Laboratory Adderss

Product: Portable air conditioner
Brand Name: See Brand Name on page 6.

Description: The product covered by this report is a household, indoor

use, cord connected portable air conditioner.

Model(s): NPL***-05C/X1E; NPL***-05C/X1E-W; FP10233US-WH;

FP10233CA-WH; 823-041V80BK; 823-041V80CW; A5405-8K;

Junki

A5407-8K; A5406-8K-CH; A5406-8K-JP

Model Similarity: These models are identical except for the model name and

brand name. First*=A to Z or blank, second*=1 to 10 or

blank, third*=A to Z or blank.

Ratings: 115V, 60Hz

Rated SACC (BTU/h) 5000

Date of receipt of sample(s): 12-Nov-2022
Date Range of Test: 14-Nov-2022
Test standard(s) or criteria(s): 20 CCR § 1605.3

Taylor Coi

ANSI/AHAM PAC-1-2015

10 CFR Part 430 Subpart B, Appendix CC

IEC 62301 Edition 2.0, 2011-01

Conclusion: The products tested comply with the Energy Efficiency

Standards of CEC.

Prepared by: Taylor Cai Approved by: Felix Li

Title: Sr. Project Engineer Title: Technical Team Leader

Signature: Signature:

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Photos:

Photo 1 - Front view



Photo 2 - Rear view





Photo 3 - Left view



Photo 4 - Right view

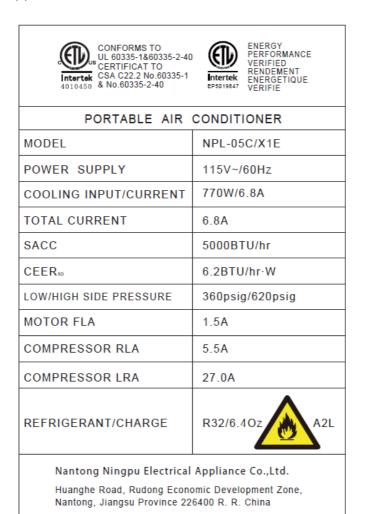




Photo 5 - Top view



Photo 6 - Nameplate(s)



DATE:



Product Details

Item	Data
Model Number of Unit Under Tested	NPL-05C/X1E
Serial Number	N/A
Condition of Sample(s)	Prototype
Product Type	Single-duct
Refrigerant	R32
Standby and Off	Standby mode only

Brand Name

NINGPU for model NPL***-05C/X1E; NPL***-05C/X1E-W

COSTWAY for model FP10233US-WH; FP10233CA-WH

HOMCOM for model 823-041V80BK; 823-041V80CW

ZAFRO for model A5405-8K; A5407-8K; A5406-8K-CH; A5406-8K-JP

R.W.FLAME for model A5405-8K; A5407-8K; A5406-8K-CH; A5406-8K-JP

COWSAR for model A5405-8K; A5407-8K; A5406-8K-CH; A5406-8K-JP

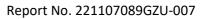
Joy Pepple for model A5405-8K; A5407-8K; A5406-8K-CH; A5406-8K-JP

Critical Components

Name	Manufacturer / trademark	Type / model	Technical data
Compressor	GMCC	KSN66E01VZDX3	115V~,60Hz R32/R410A
Fan motor	JIANGSU CHANGJIA ELECTRIC CO.,LTD/ NANTONG NINGPU ELECTRICAL APPLIANCE CO.,LTD.	YSK95-70-4BL	110-120V 60Hz
Capacitor of Compressor	HUNING ELECTRIC APPARATUS CO.,LTD.	CBB65A	55uF±5%, 250VAC 50/60Hz
Capacitor of fan motor	Sheng Ye Electric Co.,Ltd.	C61	20uF±5%, 250VAC 50/60Hz

NOTE

[&]quot;Various" means any type, from any manufacturer that complies with the "Technical data and securement means" can be used.



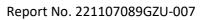


Cooling Capacity Test

Item	Unit	Sample 1	Sample 2	Sample 3
Barometric pressure	PSIA	14.682	14.689	-
Fan speed	-	High	High	ı
Applied voltage	V	114.6	114.4	-
Frequency	Hz	60.06	60.06	-
Current input to test unit	Α	6.73	6.84	-
Power input to test unit	W	768.0	779.0	-
Dry-bulb temperature of indoor inlet air	°F	80.06	80.06	-
Wet-bulb temperature of indoor inlet air	°F	66.92	66.92	ı
Dry-bulb temperature of indoor outlet air	°F	55.36	55.53	1
Wet-bulb temperature of indoor outlet air	°F	52.54	52.77	1
Dry-bulb temperature of outdoor inlet air	°F	80.06	80.06	-
Wet-bulb temperature of outdoor inlet air	°F	66.92	66.92	1
Dry-bulb temperature of outdoor outlet air	°F	108.21	108.46	1
Wet-bulb temperature of outdoor outlet air	°F	78.01	78.03	-
Volumetric flow rate of indoor outlet air	CFM	164.6	165.8	-
Volumetric flow rate of outdoor outlet air	CFM	228.1	227.3	•
Total Cooling Capacity	Btu/hr	7284.6	7223.2	-
Sensible cooling capacity	Btu/hr	4582.3	4585.7 -	
Latent cooling capacity	Btu/hr	2702.3	2637.5	-

Duct Heat Transfer

Item	Unit	Sample 1	Sample 2	Sample 3
The outer diameter of duct, d	foot	0.492	0.492	-
The extended length of duct, L	foot	3.117	3.117	-
The surface area of duct, A _{duct}	square foot	4.818	4.818	-
The surface temperature of duct, t_1	°F	105.4	105.8	-
The surface temperature of duct, t ₂	°F	102.7	103.6	-
The surface temperature of duct, t ₃	°F	103.6	103.1	-
The surface temperature of duct, t ₄	°F	99.3	99.0	-
T_{duct_SD}	°F	102.8	102.9	-
Convection coefficient, h ()	Btu/h per square foot per °F	3	3	-
Average evaporator inlet air dry-bulb temperature-T _{ei}	°F	80	80	-
Q_{duct_SD}	Btu/h	328.5	329.8	-





Infiltration Air Heat Transfer

Item	Unit	Sample 1	Sample 2	Sample 3
Average volumetric flow rate, V _{co SD}	CFM	228.1	227.3	-
Dry bulb of the condenser outlet air	°F	108.21	108.46	-
Wet bulb of the condenser outlet air	°F	78.01	78.03	-
$p_{ws}(t^*)$	PSIA	0.4752576	0.4755712	-
Humidity ratio at saturation, W _s *	-	0.0208057	0.0208092	-
Average humidity ratio of condenser outlet air, w _{co SD}	lb _w /lb _{da}	0.0137250	0.0136752	-
Average density of the condenser outlet air, ρ	lb _m /ft ³	0.0692153	0.0692211	-
Dry air mass flow rate of infiltration, \dot{m}_{sd}	lb/m	15.574	15.522	-
Specific heat of dry air, c _{p_da}	Btu/lb _m -°F	0.24	0.24	-
T _{ia_95}	°F	95	95	-
T _{ia_83}	°F	83	83	-
T _{indoor}	°F	80	80	-
C_{p_wv}	Btu/lb _m -°F	0.444	0.444	-
W _{ia_95}	lb _w /lb _{da}	0.01410	0.01410	-
W _{ia_83}	lb _w /lb _{da}	0.01086	0.01086	-
W _{indoor}	lb _w /lb _{da}	0.0112	0.0112	-
H _{fg}	Btu/lb _m	1061	1061	-
Sensible heat added to the room by infiltration air, Q_{s_95}	Btu/h	3548.0	3536.1	-
Sensible heat added to the room by infiltration air, Q_{s_83}	Btu/h	675.0	672.8	-
Latent heat added to the room by infiltration air, Q_{l_95}	Btu/h	2875.2	2865.5	-
Latent heat added to the room by infiltration air, Q_{l_83}	Btu/h	-337.1	-336.0	-
Total infiltration air heat, Q _{infiltration_95}	Btu/h	6423.3	6401.6	-
Total infiltration air heat, Q _{infiltration_83}	Btu/h	337.9	336.8	-



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Seasonally Adjusted Cooling Capacity

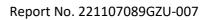
Item	Unit	Sample 1	Sample 2	Sample 3
Cooling capacity, Capacity _{SD}	Btu/h	7284.6	7223.2	-
Adjusted Cooling Capacity, ACC ₉₅	Btu/h	532.9	491.9	-
Adjusted Cooling Capacity, ACC ₈₃	Btu/h	6618.2	6556.6	-
Seasonally Adjusted Cooling Capacity, SACC	Btu/h	5401.1	5343.7	-

Off-cycle Mode and Inactive Mode

Item	Unit	Sample 1	Sample 2	Sample 3
Temperature of indoor side	°F	80.06	80.06	-
Applied voltage	V	115.0	115.0	-
Frequency	Hz	60.0	60.0	-
Off-Cycle, P _{OC}	W	0.50	0.50	-
Inactive or Off, P _{OM}	W	0.48	0.38	-

Combined Energy Efficiency Ratio

Item	Unit	Sample 1	Sample 2	Sample 3
Cooling Mode (h)	h	750	750	-
Off-Cycle (h)	h	880	880	-
Inactive or Off (h)	h	1355	1355	-
Total annual energy consumption in off-cycle-AECoc	kWh/year	0.44	0.44	-
Total annual energy consumption in inactive or off mode-AECim or AECom	kWh/year	0.65	0.51	-
Total annual energy consumption attributed to all modes except cooling-AEC _T	kWh/year	1.09	0.95	-
Annual energy consumption in cooling mode, AEC _{SD}	kWh/year	576.00	584.25	-
Combined energy efficiency ratio, CEER _{SD}	Btu/hr∙W	7.02	6.85	-





Conclusion

Item	Unit	Sample 1	Sample 2	Sample 3
Seasonally Adjusted Cooling Capacity, SACC	Btu/h	5401	5344	-
Power input to test unit	W	768.0	779.0	-
Combined energy efficiency ratio, CEER _{SD}	Btu/hr·W	7.02	6.85	-

Item	Unit	Value
Sampling size	-	2
Mean of SACC	Btu/h	5372
Mean of AEC _{SD}	kWh/year	580.1
Mean of AEC _T	kWh/year	1.02
Mean of CEER _{SD}	Btu/hr∙W	6.93
UCL/1.1 regard to AEC _{SD}	-	551.1
UCL/1.1 regard to AEC_T	-	1.32
LCL/0.9 regard to CEER _{SD}	-	7.10
Represented Value of SACC	Btu/h	5350
Represented Value of AEC _{SD}	kWh/year	580
Represented Value of AEC _T	kWh/year	1
Represented Value of CEER _{SD}	Btu/hr·W	6.9
CEC Energy Efficiency Standards, manufactured on or after February 1, 2020	Btu/hr·W	6.2
Verdict	-	Pass



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Revision Summary

Date/	Project Handler/	lt c rec	Description of Change
Proj # Site ID	Reviewer	Item	Description of Change
			None
			Tronc

--The End--