

# **GREE Electric Appliances, Inc. of Zhuhai**

## **TEST REPORT**

**SCOPE OF WORK**

ENERGY EFFICIENCY TESTING - AIR CONDITIONER

**REPORT NUMBER**

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Testing Laboratory: Intertek Testing Services Shenzhen Ltd. Guangzhou Branch  
Address: Block E, No.7-2 Guang Dong Software Science Park, Caipin Road, Guangzhou Science City, GETDD, Guangzhou, China

Applicant/Manufacturer: GREE Electric Appliances, Inc. of Zhuhai  
Address: West Jinji Rd, Qianshan, Zhuhai, Guangdong, China, 519070

Manufacturing site 1: GREE Electric Appliances, Inc. of Zhuhai  
Address: West Jinji Rd, Qianshan, Zhuhai, Guangdong, China, 519070

Manufacturing site 2: GREE ELECTRIC APPLIANCES (WUHU) CO., LTD.  
Address: North Of Lianhe Road ,West Of Wuhua Road ,East Of Yapeng Road,Economic Development District Of Sanshan,Wuhu City

Testing Location: GREE Electric Appliances, Inc. of Zhuhai  
Address: West Jinji Rd, Qianshan, Zhuhai, Guangdong, China, 519070

Product: Single ducted air conditioner

Brand Name: GREE

Description: The product covered by this report is a household, indoor used, cord connected single ducted air conditioner.

Model(s): GPC12AL-K5NNA3C; GPC12AL-K5NNA1C; GPC12AL-K5NNA2C

Model Similarity: These models are identical except for the front panel.

Ratings: 220-240V, 50Hz

Date of receipt of sample(s): 25-Jul-2019

Date Range of Test: 25-Jul-2019

Test standard(s) or criteria(s): (EU) 206/2012 + (EU) 2016/2282;  
(EU) No 626/2011 + (EU) 2017/254;  
EN14511-1:2018;  
EN14511-2:2018;  
EN14511-3:2018  
EN 12102-1: 2017;  
EN 50564: 2011

Conclusion: The product(s) tested comply with the requirements of the regulation (EU) 206/2012.

Prepared by: Taylor Cai  
Title: Engineer

Approved by: Oscar Lin  
Title: Sr.Project Engineer

Signature: Signature on file

Signature: Signature on file

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## Photos:

Photo 1 - External view of model GPC12AL-K5NNA3C



Photo 2 - External view of model GPC12AL-K5NNA1C



Photo 3 - External view of model GPC12AL-K5NNA2C



Photo 4 - Nameplate of model GPC12AL-K5NNA3C







	
<b>LOCAL AIR CONDITIONER</b>	
Model	GPC12AL-K5NNA3C
Rated Voltage	220-240V~
Rated Frequency	50Hz
Climate Type	T1
Cooling Capacity	3400W
Cooling Power Input	1305W
Cooling Rated Input	1500W
Pressure (Discharge/Suction)	3.0/1.5MPa
Maximum Allowable Pressure	3.0MPa
Sound Pressure Level	53dB(A)
Refrigerant	R290
Refri. Charge	0.20kg
Weight	35kg
Isolation	I
Manufactured Date	YYYY.MM
Do not cover air discharge openings	
GREE ELECTRIC APPLIANCES, INC. OF ZHUHAI	
	
   	
600004067081	
Add: West Jinji Rd, Qianshan, Zhuhai, Guangdong, China, 519070	

Photo 5 - Nameplate of model GPC12AL-K5NNA1C






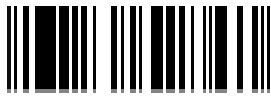
	
<b>LOCAL AIR CONDITIONER</b>	
Model	GPC12AL-K5NNA1C
Rated Voltage	220-240V~
Rated Frequency	50Hz
Climate Type	T1
Cooling Capacity	3400W
Cooling Power Input	1305W
Cooling Rated Input	1500W
Pressure (Discharge/Suction)	3.0/1.5MPa
Maximum Allowable Pressure	3.0MPa
Sound Pressure Level	53dB(A)
Refrigerant	R290
Refri. Charge	0.20kg
Weight	35kg
Isolation	
Manufactured Date	YYYY.MM
Do not cover air discharge openings	
GREE ELECTRIC APPLIANCES, INC. OF ZHUHAI	
	
   	
600004068961	
Add: West Jinji Rd, Qianshan, Zhuhai, Guangdong, China, 519070	

Photo 6 - Nameplate of model GPC12AL-K5NNA2C







	
<b>LOCAL AIR CONDITIONER</b>	
Model	GPC12AL-K5NNA2C
Rated Voltage	220-240V~
Rated Frequency	50Hz
Climate Type	T1
Cooling Capacity	3.40kW
Cooling Power Input	1305W
EER	2.60
Rated Input	1500W
Pressure (Discharge/Suction)	3.0/1.5MPa
Maximum Allowable Pressure	3.0MPa
Sound Pressure Level	53dB(A)
Refrigerant	R290
Refri. Charge	0.20kg
Weight	35kg
Isolation	I
Manufactured Date	YYYY.MM
Serial No.	
Do not cover air discharge openings	
GREE ELECTRIC APPLIANCES, INC. OF ZHUHAI	
	
   	
600004069653	
Add: West Jinji Rd, Qianshan, Zhuhai, Guangdong, China, 519070	

Photo 7 - Energy label of model GPC12AL-K5NNA3C

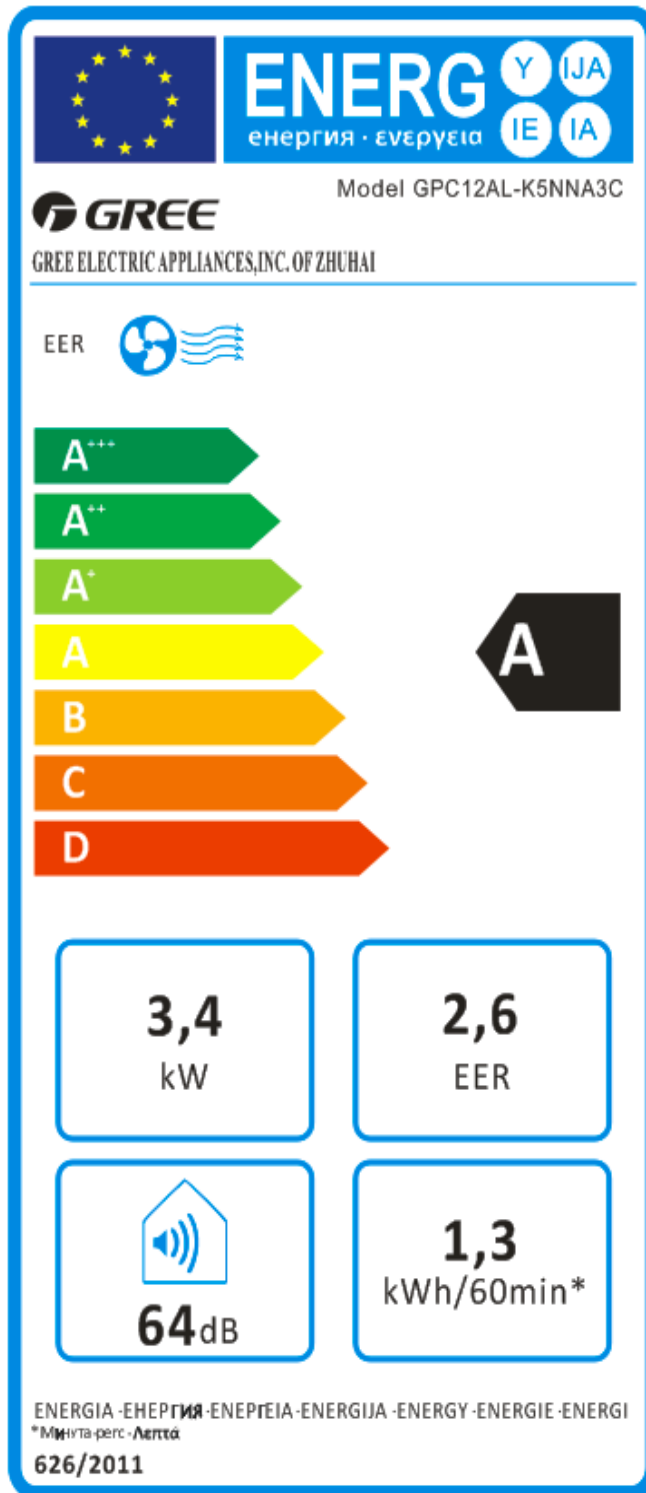




Photo 8 - Energy label of model GPC12AL-K5NNA1C

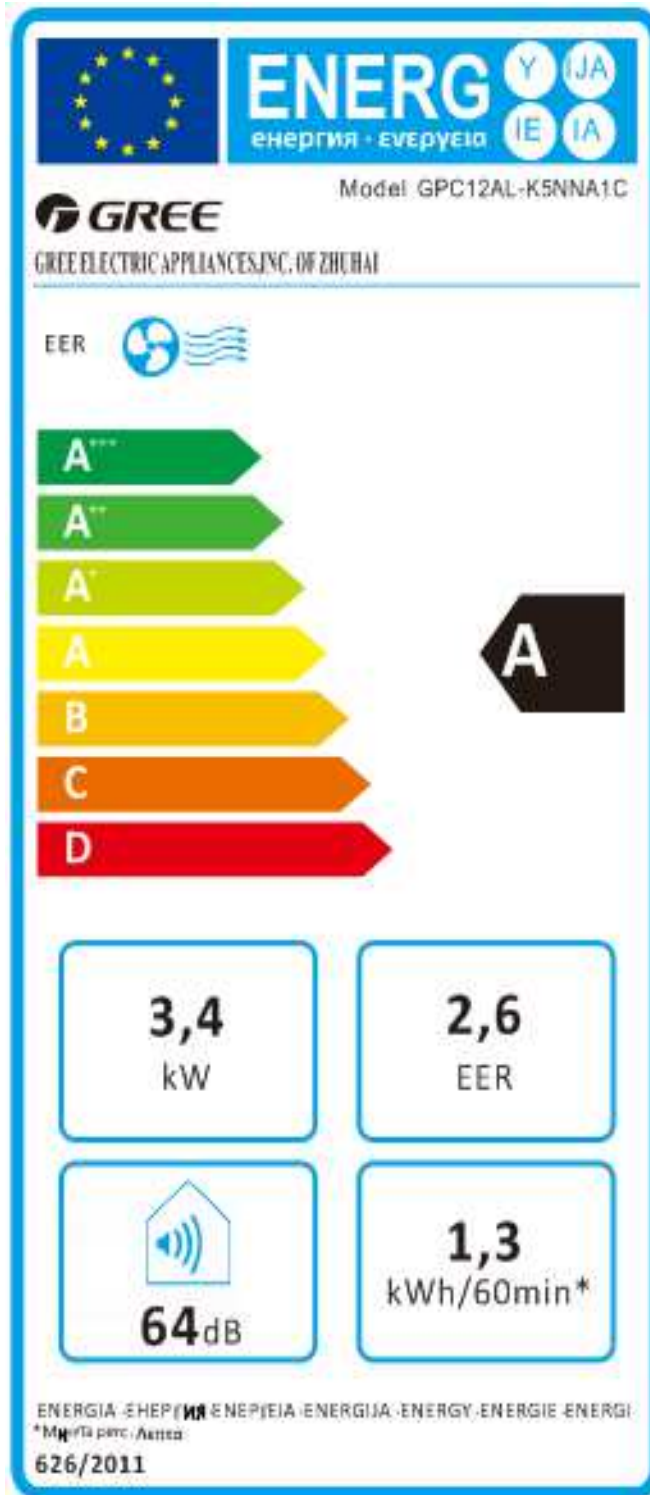
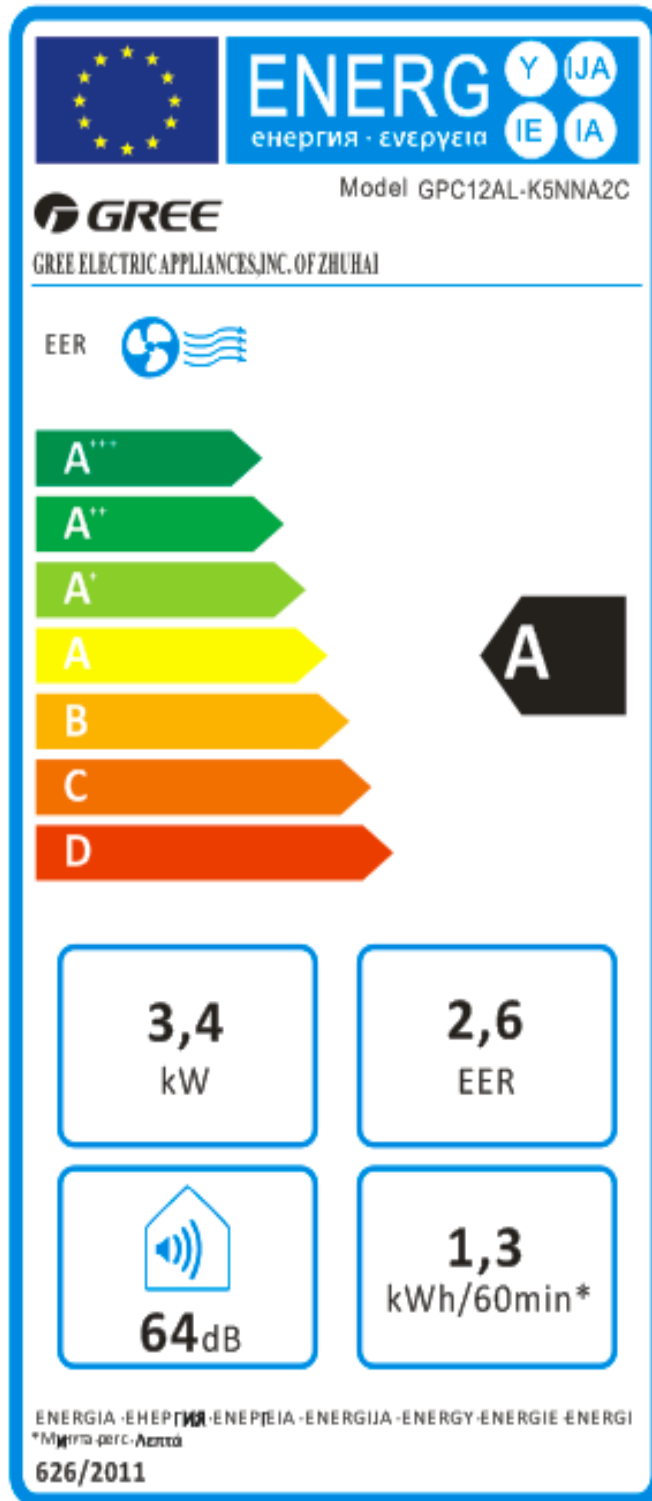


Photo 9 - Energy label of model GPC12AL-K5NNA2C



### Product Details

Item	Data
Model number of Unit Under Tested	GPC12AL-K5NNA3C
Serial number	NA
Condition of sample(s)	Prototype
Product	Single Ducted
Air-conditioner Type	Cooling Only
Refrigerant	R290
Mass of charged refrigerant	0.20 kg
Air Distribution	Non-ducted
Outdoor side heat exchanger	Air
Indoor side heat exchanger	Air
Equipped with a supplementary heater?	No
Compressor type	Single Speed

### Critical Components

Name	Manufacturer / trademark	Type / model	Technical data
Compressor	ZHUHAI LANDA COMPRESSOR CO.; LTD.	QXD-B222A030	220-240V; 50HZ; 1000W; 3.09±7%Ω/3.04±7%Ω; Class B
Capacitor of compressor	Zhuhai Gree Xinyuan Electronic Co.; LTD	CBB65	40uF/450V/T70
Evaporator side fan motor	Zhuhai Kaibang Motor Manufacturing CO.;LTD.	YD28X	220-240V 0.28A 50Hz 16W B Main:352.6±8%Ω;Aux:95±8%Ω
Evaporator side fan motor (Optional)	Zhuhai city Tongde electric equipment co.;ltd	YD28X	220-240V 0.28A "50Hz" 16W Class B;M : 429±8%Ω A : 81.5±8%Ω"
Evaporator side fan motor (Optional)	Zhuhai Kaibang Motor Manufacturing CO LTD; ( Hefei Kaibang Motor Co;; Ltd;)	YD28X	220-240V;50Hz;16W;0.28A;Class B;Main:352.6±8%Ω;Aux:95±8%Ω
Condenser side fan motor	Zhuhai Kaibang Motor Manufacturing CO.;LTD.	YD23X	220-240V 0.53A 50Hz 50W B Main:123±8%Ω' Aux:88±8%Ω

Condenser side fan motor (Optional)	Zhuhai city Tongde electric equipment co.;ltd	YD23X	220-240V" 0.5A "50Hz 50W B "M : 130.5 ±8%Ω A : 89.0±8%Ω"
Condenser side fan motor (Optional)	Zhuhai Kaibang Motor Manufacturing CO LTD; ( Hefei Kaibang Motor Co;; Ltd;)	YD23X	220-240V;50Hz;50W;0.53A;Class B;Main:123±8%ΩAux:88±8%Ω
Capacitor of both evaporator side and condenser side fan motor	XiamenFaratronic Co.Ltd.	C6G	3.5uF ; 450V ; T85
Alternative	Ningbo Shine Electrical Co.; Ltd.	CBB61S	3.5μF/450V/T70
Alternative	Shanghai Haoye Electric Co.; Ltd.	MKPS	3.5uF/450V;T70
Alternative	Shanghai Haoye Electric Co.; Ltd.	MKP-1	3.5uF/450V;T85
Alternative	Guangdong Fengming Electronic Tech. Co.; Ltd.	CBB61	3.5uF/450VAC/T70
<p>NOTE  "Various" means any type, from any manufacturer that complies with the "Technical data and securement means" can be used.</p>			

### Ecodesign requirements

Clause	Ecodesign requirements	Result - Remark	Verdict
2a)	From 1 January 2013: Single duct and double duct air conditioners shall correspond to requirements as indicated in Tables 1, 2 and 3		Pass
Table 1	Requirements for minimum energy efficiency	Tested EER: 2.62	Pass
Table 2	Off mode: Power consumption of equipment in any off-mode condition shall not exceed 1,00 W		N/A
	Standby mode: The power consumption of equipment in any condition providing only a reactivation function, or providing only a reactivation function and a mere indication of enabled reactivation function, shall not exceed 1,00 W.	0.33W	Pass
	Standby mode: The power consumption of equipment in any condition providing only information or status display, or providing only a combination of reactivation function and information or status display, shall not exceed 2,00 W.		N/A
	Availability of standby and/or off mode Equipment shall, except where this is inappropriate for the intended use, provide off mode and/or standby mode, and/or another condition which does not exceed the applicable power consumption requirements for off mode and/or standby mode when the equipment is connected to the mains power source.		Pass
Table 3	Indoor sound power level no more than 65 dB(A)	Tested value: 63.9dB(A)	Pass
2b)	From 1 January 2013, air conditioners, except single and double duct air conditioners, shall correspond to minimum energy efficiency and maximum sound power level requirements as indicated in Tables 4 and 5		N/A
Table 4	Requirements for minimum energy efficiency		N/A
Table 5	Requirements for maximum sound power level		N/A

Clause	Ecodesign requirements	Result - Remark	Verdict
2c)	From 1 January 2014, air conditioners shall correspond to requirements as indicated in the table 6	Tested EER: 2.62	Pass
2d)	From 1 January 2014, single duct and double duct air conditioners and comfort fans shall correspond to requirements as indicated in Table 7		Pass
Table 7	Off mode: Power consumption of equipment in any off-mode condition shall not exceed 0,50 W.		N/A
	Standby mode: The power consumption of equipment in any condition providing only a reactivation function, or providing only a reactivation function and a mere indication of enabled reactivation function, shall not exceed 0,50 W.	0.33W	Pass
	Standby mode: The power consumption of equipment in any condition providing only information or status display, or providing only a combination of reactivation function and information or status display shall not exceed 1,00 W.		N/A
	Availability of standby and/or off mode Equipment shall, except where this is inappropriate for the intended use, provide off mode and/or standby mode, and/or another condition which does not exceed the applicable power consumption requirements for off mode and/or standby mode when the equipment is connected to the mains power source.		Pass

Clause	Ecodesign requirements	Result - Remark	Verdict
	<p>Power management</p> <p>When equipment is not providing the main function, or when other energy- using product(s) are not dependent on its functions, equipment shall, unless inappropriate for the intended use, offer a power management function, or a similar function, that switches equipment after the shortest possible period of time appropriate for the intended use of the equipment, automatically into:</p> <ul style="list-style-type: none"><li>— standby mode, or</li><li>— off mode, or</li><li>— another condition which does not exceed the applicable power consumption requirements for off mode and/or standby mode when the equipment is connected to the mains power source. The power management function shall be activated before delivery.</li></ul>		N/A

**Information requirements for single duct and double duct air conditioners.**



Information to identify the model(s) to which the information relates to [fill in as necessary]				
Description	Symbol	Rated	Tested	Unit
Capacity for cooling	$P_{rated}$ for cooling	3.40	3.425	kW
Capacity for heating	$P_{rated}$ for heating	--	--	kW
Power input for cooling	$P_{EER}$	1.305	1.305	kW
Power input for heating	$P_{COP}$	--	x,x	kW
Energy efficiency ratio	$EER_d$	2.60	2.62	—
Coefficient of performance	$COP_d$	--	--	—
Power consumption in thermostat-off mode	$P_{TO}$	--	--	W
Power consumption in standby mode	$P_{SB}$	--	0.33	W
Electricity consumption of single duct appliances (cooling)	$QSD$	1.3	1.305	kWh/h
Electricity consumption of single duct appliances (heating)	$QSD$	--	--	kWh/h
Sound power level	$L_{WA}$	64	63.9	dB(A)
Global warming potential	$GWP$	3	3	kgCO <sub>2</sub> eq.



**Cooling capacity test**

Item	Unit	Cooling	Heating
Test method	-	Calorimeter	Calorimeter
Barometric pressure	<i>kPa</i>	101.10	--
Voltage	<i>V</i>	231.0	--
Frequency	<i>Hz</i>	50.0	--
Total current	<i>A</i>	5.77	--
Total power input	<i>W</i>	1305.0	--
Speed control setting of the fan speed	-	High	--
Dry-bulb temperature of air entering equipment, indoor side	°C	35.00	--
Wet-bulb temperature of air entering equipment, indoor side	°C	23.98	--
Dry-bulb temperature of air entering equipment, outdoor side	°C	35.03	--
Wet-bulb temperature of air entering equipment, outdoor side	°C	23.97	--
Total Cooling Capacity Indoor Side	<i>W</i>	3424.8	--
Sensible Cooling Capacity Indoor Side	<i>W</i>	2250.0	--
Sensible Heat Ratio	%	65.7	--
Total Cooling Capacity Outdoor Side	<i>W</i>	3453	--
Difference between Total Cooling Capacity from Indoor and Outdoor Side	%	-0.84	--
EER	<i>W/W</i>	2.62	--
Heating Capacity Indoor Side	<i>W</i>	--	--
Heating Capacity Outdoor Side	<i>W</i>	--	--
Difference between Total Heating Capacity from Indoor and Outdoor Side	%	--	--
COP	<i>W/W</i>	--	--

## Revision Summary

Date/ Proj # Site ID	Project Handler/ Reviewer	Item	Description of Change
25-Dec-2019	Taylor Cai	Page 2	Add model GPC12AL-K5NNA1C.
191224043GZU	Oscar Lin	Page 2	Add Manufacturing site 2&Address.
		Page 3, 5, 7	Add GPC12AL-K5NNA1C's photo, nameplate and energy label.
1-Apr-2020	Taylor Cai 	Page 2	Add model GPC12AL-K5NNA2C.
200323042GZU	Oscar Lin	Page 2	Revise Test standard(s) or criteria(s) from "EN14511:2018" to "EN14511-1:2018; EN14511-2:2018; EN14511-3:2018"
		Photo	Add GPC12AL-K5NNA2C's picture, nameplate and energy label.
		Page 16	Add rated value in the sheet.

--The End--