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TESTING
CNAS L0095



Deutsche
Akkreditierungsstelle
D-PL-17198-01-00

TEST REPORT

Energy efficiency tests for the EU standards of refrigerating appliances with a direct sales function

Applicant Name.....	Guangdong Sansheng Appliances Co.,Ltd.		
Address.....	No.22 Xinhui Road, Shunde Science &Technology Industrial Park, Wusha, Daliang, Shunde, Foshan, Guangdong, China		
Manufacturer.....	Same as the applicant.		
Address.....	Same as the applicant's.		
Factory.....	Same as the applicant.		
Address.....	Same as the applicant's.		
Product name / Trademark.....	BACK BAR COOLER / —		
Model / Rating	LG-330HE / 220-240 V~ 50 Hz Rated current: 0,72 A		
Date of receipt of test item.....	2020-08-01	Date(s) of test	2020-08-01 ~ 2020-08-20
Test specification / Standard.....	EN 16902:2016, Directive (EU) 2017/1369, Regulation (EU) No. 2019/2018 and Regulation (EU) No. 2019/2024		
Test item.....	Gross volume, Electrical energy consumption test		
Test result	Gross volume (L)	324,8	
	Electrical energy consumption (kWh/24h)	1,508	
	Energy efficiency index (EEI)	35,1	
	Energy efficiency class	D	
Tested by: Engineer	Jie Huixia	... <i>Jie Huixia</i>	
Reviewed by: Manager	Li Tie	... <i>Li Tie</i>	
Approved by: Director	Li Yunmei	... <i>Li Yunmei</i>	
Date of issue	2020-09-04		
Testing laboratory			
Vkan Certification & Testing Co., Ltd. (CVC) Address: No.3, Tiantai 1st Road, Kaitai Avenue, Science City, Guangzhou, Guangdong, China http://www.cvc.org.cn Tel: (086)-20-32293888 Fax:(086)-20-32293889 E-mail: office@cvc.org.cn			
This test report relates only to the tested product, and shall not be reproduced except in full, without written approval of CVC.			

Energy efficiency tests for the EU standards of refrigerating appliances with a direct sales function

Test case verdicts	
Test case does not apply to the test object	N
Test item does meet the requirement	P
Test item does not meet the requirement	F
Procedure deviation	N
Non-standard test method	N

General remarks

The test results presented in this report relate only to the item tested.

The test report is invalid without the official stamp of CVC.

The test report is invalid without the signatures of Author and Reviewer.

Throughout this report a comma is used as the decimal separator.

Summary of the testing

All tests are performed on model LG-330HE, the test voltage is 230 V / 50 Hz.

Nameplates of the tested sample:

BACK BAR COOLER

<p style="text-align: center; margin: 0;">ELECTRIC CIRCUIT DIAGRAM</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>MODEL</td> <td>LG-330HE</td> </tr> <tr> <td>TEST ROOM CLIMATE CLASS</td> <td>CC2</td> </tr> <tr> <td>M-CAN TEMPERATURE CLASS</td> <td>K1</td> </tr> <tr> <td>PROTECTIVE CLASSIFICATION OF ELECTRIC SHOCK RESISTANCE</td> <td>I</td> </tr> <tr> <td>DEGREE OF PROTECTION AGAINST INGRESS OF WATER</td> <td>IP X0</td> </tr> <tr> <td>RATED VOLTAGE</td> <td>220-240V~</td> </tr> <tr> <td>RATED FREQUENCY</td> <td>50Hz</td> </tr> <tr> <td>NET VOLUME</td> <td>292L</td> </tr> <tr> <td>GROSS VOLUME</td> <td>324L</td> </tr> <tr> <td>RATED INPUT POWER</td> <td>160W</td> </tr> <tr> <td>RATED CURRENT</td> <td>0.78A</td> </tr> <tr> <td>LAMP POWER</td> <td>MAX 8W</td> </tr> <tr> <td>REFRIGERANT</td> <td>R600a(42g)</td> </tr> <tr> <td>ENERGY CONSUMPTION</td> <td>1.52kWh/24h</td> </tr> <tr> <td>INSULATION BLOWING GAS</td> <td>CYCLOPENTANE</td> </tr> <tr> <td>NET WEIGHT</td> <td>80kg</td> </tr> </table>	MODEL	LG-330HE	TEST ROOM CLIMATE CLASS	CC2	M-CAN TEMPERATURE CLASS	K1	PROTECTIVE CLASSIFICATION OF ELECTRIC SHOCK RESISTANCE	I	DEGREE OF PROTECTION AGAINST INGRESS OF WATER	IP X0	RATED VOLTAGE	220-240V~	RATED FREQUENCY	50Hz	NET VOLUME	292L	GROSS VOLUME	324L	RATED INPUT POWER	160W	RATED CURRENT	0.78A	LAMP POWER	MAX 8W	REFRIGERANT	R600a(42g)	ENERGY CONSUMPTION	1.52kWh/24h	INSULATION BLOWING GAS	CYCLOPENTANE	NET WEIGHT	80kg
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Guangdong Sansheng Appliances Co., Ltd.
 No.22 Xinhui Road, Shunde Science & Technology Industrial Park, Wusha, Daliang, Shunde District, Foshan City, Guangdong PRC.

Photos of tested sample:



Front view



Back view

Photos of tested sample:



Compressor model



Temperature controller

1 INTRODUCTION

This report presents the results of test conducted for purposes of energy labelling approval on the refrigerating appliances with a direct sales function listed in section 2. The tests for electrical energy consumption test are given in sections 3. The details of gross volume calculations are given in section 4. The process followed to calculate the appliance's efficiency class are showed in section 5 All tests were conducted at CVC laboratories, in accordance with EN 16902:2016, Directive (EU) 2017/1369, Regulation (EU) No. 2019/2018 and Regulation (EU) No. 2019/2024.


2 APPLIANCE TESTED

The descriptions for the refrigerating appliances are as follows:

Manufacture:	Guangdong Sansheng Appliances Co.,Ltd.
Address of manufacture:	No.22 Xinhui Road,Shunde Science &Technology Industrial Park, Wusha,Daliang, Shunde,Foshan, Guangdong,China
Model name:	BACK BAR COOLER
Model identifier:	LG-330HE
Use:	Display and sale
Type of refrigerating appliance with a direct sales function:	Beverage cooler
Cabinet family code	BCSTn (Semi Vertical, Closed transparent door, EMD no)
Brand name:	—
Serial number:	—
Rated voltage:	220-240 V~
Rated frequency:	50 Hz
Rated current:	0,72 A
Total volume:	324 L(gross) / 292 L(net)
Rated energy consumption:	1,52 kWh/24h
Lamp power:	MAX 8 W
Test room climate class:	CC2
M-can temperature class:	K1
Number of glass doors:	3
Internal fittings	Shelves
Overall external dimensions at installation	Width: 1350 mm Depth: 530 mm Height: 895 mm
Overall external dimensions in service	Width: 2200 mm Depth: 955 mm Height: 895 mm

3 ELECTRICAL ENERGY CONSUMPTION TEST

Electical energy consumption test was measured in accordance with EN 16902:2016, Directive (EU) 2017/1369, Regulation (EU) No. 2019/2018 and Regulation (EU) No. 2019/2024.

Test conditions	
Ambient temperature:	25 °C 60%RH
Power supply:	230 V 50 Hz
Temperature control settings:	2,3 °C
Other test conditions	EN 16902:2016, Directive (EU) 2017/1369, Regulation (EU) No. 2019/2018 and Regulation (EU) No. 2019/2024.
Test results	
Highest temperature of warmest M-cans, θ_{ah} (°C)	5,5
Lowest temperature of coldest M-cans, θ_b (°C)	0,8
The average mean temperature of M-cans, θ_m (°C)	3,3
Energy consumption of 12h with lamp switch on (kWh/12h)	0,794
Energy consumption of 12h with lamp switch off (kWh/12h)	0,714
Daily energy consumption (kWh/24h)	1,508
Compressor switching on/off frequency (min/ min)	0,59
Relative running time	37,1%
Load plan:	
	

4 GROSS VOLUME TEST

Gross volume was calculated in accordance with EN 16902:2016.

Item	Rated (L)	Measured (L)
Total gross volume	324	324,8

5 CALCULATIONS OF ENERGY EFFICIENCY INDEX

Energy efficiency index was calculated, in accordance with Directive (EU) 2017/1369, Regulation (EU) No. 2019/2018 and Regulation (EU) No. 2019/2024.

Items	Rated value	Measured value	Limit	Deviation and Verdict
Total gross volume, (L)	324	324,8	≥-3%	+0,25% P
Average compartment temperature \bar{T}_C , (°C)	3,5	3,5	—	—
Climate class factor CC	1,05	1,05	—	—
Equivalent volume of the compartments Y, (L) $Y = \text{GrossVolume} \times ((25 - T_C) / 20) \times CC$	365,7	366,6	—	—
Modelling parameters M	2,1	2,1	—	—
Modelling parameters N	0,006	0,006	—	—
Temperature coefficient C	1,00	1,00	—	—
Correction factor P	1,00	1,00	—	—
Standard annual energy consumption SAE, (kWh/a) $SAE = 365 \times P \times (M + N \times Y) \times C$	1567,42	1569,39	—	—
E_{daily} , (kWh/24h)	1,52	1,508	≤+10%	-0,79% P
Annual energy consumption AE, (kWh/a) $AE = 365 \times E_{\text{daily}}$	554,80	550,42	≤+10%	-0,79% P
EEI, Energy efficiency index, $EEI = \frac{AE}{SAE}$	35,4	35,1	—	—
Energy efficiency class: EEI < 10 A 10 ≤ EEI < 20 B 20 ≤ EEI < 35 C 35 ≤ EEI < 50 D 50 ≤ EEI < 65 E 65 ≤ EEI < 80 F EEI ≥ 70 G	D	D	—	—

I m p o r t a n t

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and “ / ” means “not test”.

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