



**QUALITY ASSURANCE TESTING LAB,
WESTERN REFRIGERATION PVT. LTD.**

Test Report for Deep Freezer Performance

Testing Lab Name:	Quality Assurance Testing Lab, Western Refrigeration Private Limited
Testing Lab Address & Location:	Survey no 633,634,635,636,638,726/1,732,736,741,743,747,748,752 Village Tadgam, Taluka Umbergaon District Valsad, Gujarat – 396135
Unit Picked Up From:	Production Line FG Unit
Appliance:	Deep Freezer
Manufacturer:	Western Refrigeration Private Limited
Type:	Hard Top Deep Freezer
Model name :	D875H325
Machine Serial number:	41818230800009
Refrigerant Name:	R-290 (110 gram)
Rated voltage / frequency / number of phase:	230V / 50Hz / 1 Ph
Rated Gross Volume (Litre):	722
Rated Storage Volume (Litre):	703
Electricity Consumption per year (kWh/year):	1624
Test Report No.:	WRL/TAD/23/0021
Report Issue Date:	27.10.2023
Date of Sample Receipt:	15.10.2023
Condition of Sample on Receipt:	Satisfactory
Sample UID No.:	WQL/TAD/CF/231015/0021
Purpose of testing:	For BIS Requirement
Test Standard / Procedure:	IS 7872 : 2020 Deep Freezers - Specification + Amendment No. 1 January 2022
Date(s) of testing:	16.10.2023 to 26.10.2023
Test Result:	PASS
Total Number of Pages:	6
Remarks:	

Remarks :

1. The results contained in this report correspond only to the particular test sample(s) as received for testing.
2. This Test Report shall not be reproduced except in full without written approval of the Assistant General Manager-QA

Test Report Prepared by:

Engineer

Name: Bhavin Patel

Signature:

Test Report Reviewed by:

Manager

Name: Kiranpal Singh

Signature:

Test Report Authorized by:

Assistant General Manager

Name: Bhagwant Pande

Signature:



QUALITY ASSURANCE TESTING LAB,
WESTERN REFRIGERATION PVT. LTD.

Test Type:	No Load Pull Down Test	
Test Report No.:	WRL/TAD/23/0021	
Model name :	D875H325	
Machine Serial Number :	41818230800009	
Date of test:	16.10.2023	
Tested by :	Bhavin Patel	
Test Standard(s):	IS 7872 : 2020 Deep Freezers - Specification + Amendment No. 1 January 2022 (Clause 11.1)	
Test Summary		
Parameters	Rated/Declared Value (Specification)	Measured Value
Actual test conditions:	43 ±1°C & 45~75% RH	43.0°C & 49.9%
Test Voltage:	230 ±1%	230.2
Test Frequency:	50Hz ±1%	50.0
Temperature of Freezer compartment (F1 °C)	<-18°C (Average Air Temperature)	-29.7°C at 200minute
Temperature of Freezer compartment (F2 °C)	<-18°C (Average Air Temperature)	Not applicable
Maximum warmest temperature (°C)	<-15°C	-26.4°C at 200minute
Temperature Control/thermostat Setting		7 #
Pull down time (Minutes) to reach Average Air Temperature < -18°C.	< 200 minutes	76 minutes
Result	PASS	
Remarks :		

Tested by: B.A.Patel

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WRLTAD/F/QA/Lab/003



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Test Type :	Energy Consumption test			
Test Report No.:	WRL/TAD/23/0021			
Model name :	D875H325			
Machine Serial Number :	41818230800009			
Date of test :	17.10.2023 to 18.10.2023			
Tested by :	Bhavin Patel			
Test Standard(s):	IS 7872 : 2020 Deep Freezers - Specification + Amendment No. 1 January 2022 (Clause 11.2)			
Test Summary				
Parameters	Rated/Declared Value (Specification)	Energy at Single set point with Target temperature	Energy test by Interpolation - Two set point	
		Measured Value	Measured Value at Warm point 1	Measured Value at Cold point 2
Ambient test conditions	38°C ± 1°C & 45~75% RH	Not applicable	38.0°C & 65.0%	38.0°C & 65.0%
Test Voltage	230 ±1%	Not applicable	230.3	230.3
Test Frequency	50Hz ±1%	Not applicable	50.0	50.0
Temperature of Freezer compartment (F1 °C)	-18°C ± 2°C (Average Air Temperature)	Not applicable	-16.1°C	-19.4°C
Temperature of Freezer compartment (F2 °C)	-18°C ± 2°C (Average Air Temperature)	Not applicable	Not applicable	Not applicable
Temperature of Freezer compartment if more than 2 (°C)	-18°C ± 2°C (Average Air Temperature)	Not applicable	Not applicable	Not applicable
Average Temperature of Freezer compartment (°C)	-18°C ± 2°C (Average Air Temperature)	Not applicable	-16.1°C	-19.4°C
Energy meter reading (Wh)		Not applicable	950.78	1066.20
Time elapsed (minutes)		Not applicable	367	367
Percentage running time (Hours)		Not applicable	42.7%	50.5%
Target temperature - (t _x)		Not applicable	-18.0°C	
measured compartment temperature for point 1 (warm point) - (t ₁)		Not applicable	-16.1°C	
measured energy consumption rate of the appliance for point 1, - (E ₁)		Not applicable	3.731	
measured compartment temperature for point 2 (cold point), - (t ₂)		Not applicable	-19.4°C	
measured energy consumption rate of the appliance for point 2, - (E ₂)		Not applicable	4.262	
calculated energy consumption rate of the appliance at the target temperature t _x (E _x) kWh/Day		Not applicable	4.037	
$E_x = E_1 + \left[(E_2 - E_1) \times \frac{(t_x - t_1)}{(t_2 - t_1)} \right]$		Not applicable	4.037	
Energy consumption rate per day (Wh/Day)	4449.3		4036.5	
Annual energy consumption (kWh/year)	1624		1473.326	
Parameter	Specification	Result	Result	
Declared Annual Energy Consumption shall be less than or equal to 1.1 * Measured Annual Energy Consumption)	≤ 10%		-10.23%	
Result			PASS	
Remarks :				

Tested by: B.A.Patel

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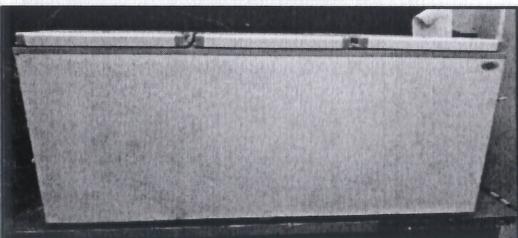
Test Type:	Thermal Insulation Test (External Condensation Test)
Test Report No.:	WRL/TAD/23/0021
Model name :	D875H325
Machine Serial Number :	41818230800009
Date of test :	19.10.2023
Tested by :	Bhavin Patel
Test Standard(s):	IS 7872 : 2020 Deep Freezers - Specification + Amendment No. 1 January 2022 (Clause 11.6)

Test Summary

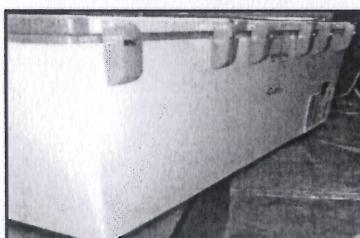
Parameters	Rated/Declared & Specification Value	Measured Value
Ambient test conditions:	31°C to 33°C & RH 70 to 75%	33.0°C & 75.0%
Test Voltage:	230 ±1%	230.3
Test Frequency:	50Hz ±1%	50
Average Temperature of Freezer compartment (°C)	-18°C	-18.2°C
External Condensation	No Condensed moisture is visible on the outer surface. No running droplets are visible on the external surface of the freezer.	No Condensed Moisture Or Running Droplets Observed On The Outer Surface Of Freezer

Appliance actual Images during test

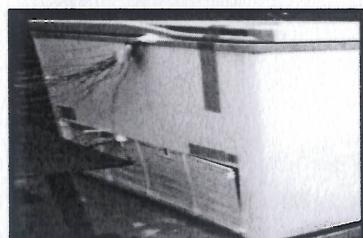
External surface - Front view



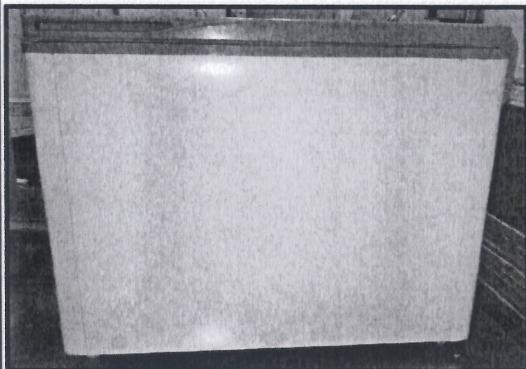
External surface - Back view



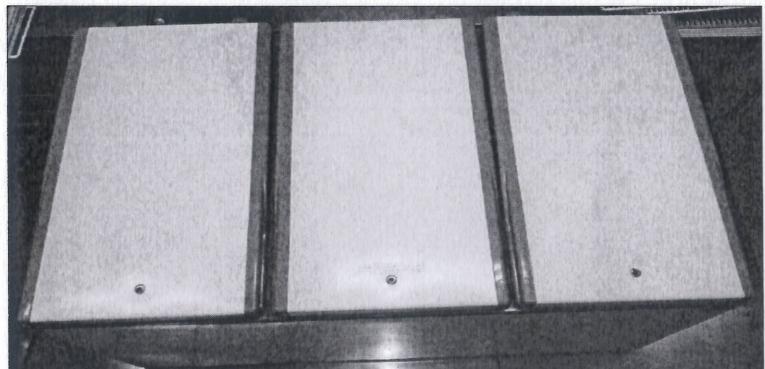
External surface - LHS view



External surface - RHS view



External surface - Top view



Result

PASS

Remarks :

Tested by: B.A.Patel

Reviewed by:

Authorized by:
G.J.Singh



QUALITY ASSURANCE TESTING LAB,
WESTERN REFRIGERATION PVT. LTD.

Test Type:	Temperature Rise Test	
Test Report No.:	WRL/TAD/23/0021	
Model name :	D875H325	
Machine Serial Number :	41818230800009	
Date of test:	20.10.2023 to 26.10.2023	
Tested by :	Bhavin Patel	
Test Standard(s):	IS 7872 : 2020 Deep Freezers - Specification + Amendment No. 1 January 2022 (Clause 11.3)	
Test Summary		
Parameters	Rated/Declared & Specification Value	Measured Value
Ambient test conditions:	43 ±1°C & 45~75% RH	43.0°C & 50.4%
Test Voltage:	230 ±1%	230.2
Test Frequency:	50Hz ±1%	50.0
Warmest M-pakages Temperature of Freezer compartment	-18°C	-20.2°C
Warmest M-pakages temperature reaches -9°C at time		11Hrs and 10min
Result	PASS	
<u>Remarks :</u>		

Tested by: Bhavin Patel

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Test Report No.: WRL/TAD/23/0021

Test Equipment Used

Sr. No.	Test Instrument	Make	Model	Serial number / Equipment ID	Calibration Due Date
1	'T' type Thermocouple	Omega	TT-T-24	QA/1125/TC-01	06-Apr-24
2	SMARTDAC+ Data Acquisition & Control	Yokogawa	GM90PS / GM10-2E0/C3/MT/MC	QA/1125/DLM-01	06-Apr-24
3	'T' type Thermocouple	Omega	TT-T-24	QA/1125/TC-02	08-Apr-24
4	SMARTDAC+ Data Acquisition & Control	Yokogawa	GM90PS / GM10-2E0 / GX90XA	QA/1125/DLM-02	08-Apr-24
5	Temp Controller	Yokogawa	UT55A	QA/1125/TCI-01	09-Apr-24
6	Humidity Controller	Yokogawa	UT55A	QA/1125/HCI-01	09-Apr-24
7	Temperature Humidity Transducer	Rotronic	XD33A-S3X	QA/1125/HCS-01	09-Apr-24
8	Digital Single Phase Power Meter - Unit-1	Yokogawa	WT310E	QA/1125/VAW-01	05-Apr-24
9	Digital Single Phase Power Meter- Unit-2	Yokogawa	WT310E	QA/1125/VAW-02	05-Apr-24
10	Measuring tape	Freemans	IK519	QA/1125/MT-01	24-Jul-24
11	Stainless Steel Foot Rules	Ajanta	300	QA/1125/MS-01	24-Jul-24
12	Stainless Steel Foot Rules	Ajanta	600	QA/1125/MS-02	24-Jul-24
13	Stainless Steel Foot Rules	Ajanta	1000	QA/1125/MS-03	24-Jul-24

----- End of Test Report -----

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