



TEST REPORT IEC 60335-2-24

Safety of household and similar electrical appliances Part 2: Particular requirements for refrigerating appliances, ice-cream appliances and ice-makers

Report Number. Attachment of 50253735 002

Name of Testing Laboratory

preparing the Report TÜV Rheinland Korea Ltd.

Applicant's name...... WACO Corp.

Address A-301, Hagye Technotwon,

10, Nowon-ro 15-gil, Nowon-gu, Seoul, 01788, Republic of Korea

Test specification:

Standard IEC 60335-2-24:2010, AMD1:2012, AMD2:2017 in conjunction

with IEC 60335-1:2010, COR1:2010, COR2:2010, AMD1:2013,

COR1:2014, AMD2:2016, COR1:2016

Test procedure.....: CB Scheme

Non-standard test method.....: N/A

Test Report Form No.....: IEC60335_2_24R

Test Report Form(s) Originator....: Electrosuisse

Master TRF Dated 2017-11-09

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General disclaimer:

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

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Test item description:	Hot & Cold Water Dispenser
Trade Mark:	WACO
Manufacturer:	WACO Corp. (Same as applicant)
Model/Type reference:	INFINITE-L, INFINITE-M, INFINITE-S, INFINITE-20 INFINITE-L (UF), INFINITE-S (UF) (see page 9)
Ratings:	220-240 V ~, 50/60 Hz, Climatic class : T, Class I Hot : 470 W, Cold : 0.8 – 0.9 A



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Responsible Testing Laboratory (as applicab	le), testing procedure	and testing location(s):	
	TÜV Rheinland Korea Ltd.		
Testing location/ address:	2F, N-Tower, Semicolon Mullae 25, Mullae-ro 28-gil, Yeongdeungpo-gu, Seoul #07298, Republic of Korea		
Tested by (name, function, signature):	Song-Yi Shin Project Engineer		
Approved by (name, function, signature):	Ki-Tae Park Reviewer		
☐ Testing procedure: CTF Stage 1:			
Testing location/ address::			
Tested by (name, function, signature):			
Approved by (name, function, signature):			
☐ Testing procedure: CTF Stage 2:			
Testing location/ address:			
Tested by (name + signature):			
Witnessed by (name, function, signature).:			
Approved by (name, function, signature):			
☐ Testing procedure: CTF Stage 3:			
☐ Testing procedure: CTF Stage 4:			
Testing location/ address:			
Tested by (name, function, signature):			
Witnessed by (name, function, signature).:			
Approved by (name, function, signature):			
Supervised by (name, function, signature) :			



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List of Attachments (including a total number of pages in each attachment): Attachment separated from this Test Report :

- EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

Summary of testing:

Production sample without serial no. was tested.

The model, INFINITE-S(UF), was tested as the representative model, the most unfavourable results were written in this report and fulfilled the test specifications

Tests performed (name of test and test clause): All applicable tests as described in the compliance checklist were performed at TÜV Rheinland Korea Ltd.

Testing location:

TÜV Rheinland Korea Ltd.

2F, N-Tower, Semicolon Mullae 25, Mullae-ro 28-gil, Yeongdeungpo-gu, Seoul #07298, Republic of Korea

Summary of compliance with National Differences

EU Group Differences, EU Special National Conditions, EU A-Deviations

☐ The product fulfils the requirements of

- EN 60335-2-24:2010 + A1:2019 + A2:2019 +A11:2020
- EN 60335-1:2012 + A11:2014 + A13:2017 +A1:2019+A14:2019+A2:2019+A15:2021
- EN 62233:2008

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Copy of marking plate:

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.

Hot & Cold Water Dispenser

MODEL NO. INFINITE-S

POWER SOURCE.

220 -240V ~ 50/60Hz

HOT: 470W, COLD: 0.8-0.9A

Climatic Class: T

Total mass of refrigerant: 36g

Refrigerant: R-134a

MANUFACTURER:

WGCO Corp. (OLD: Hyundai Wacotec Co., Ltd.)

A-301, Hagye Technotown, 10, Nowon-ro 15-gil, Nowon-gu, Seoul, Korea

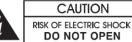
MADE IN KOREA

FOR HOUSEHOLD USE











WARNING: TO PREVENT ELECTRIC SHOCK OR FIRE HAZARD, DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS ARE INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL DO NOT EXPOSE THIS APPLIANCE TO WATER OR MOISTURE.

WARNING	REFER INTERNAL SERVICING TO QUALIFIED PERSONNEL.
ATTENTION	L'APPAREIL NE DOIT ETRE OUVERT QUE PAR UN SPEDIALISTE
ACHTUNG	DAS GERA DARF NUR VOM FACHMANN GEOFNET WERDEN

ATENCION ESTE APARATO DEBE SER ABIERTO POR UN TENICO ESPECIALIZAD

Hot & Cold Water Dispenser

MODEL NO. INFINITE-M

POWER SOURCE.

220 -240V ~ 50/60Hz

HOT: 470W, COLD: 0.8-0.9A

Climatic Class: T

Total mass of refrigerant: 36g

Refrigerant: R-134a

MANUFACTURER:

WGCO Corp. (OLD: Hyundai Wacotec Co., Ltd.)

A-301, Hagye Technotown, 10, Nowon-ro 15-gil, Nowon-gu, Seoul, Korea

MADE IN KOREA FOR HOUSEHOLD USE









CAUTION RISK OF ELECTRIC SHOCK



WARNING: SHOCK HAZARD-DO NOT OPEN. AVIS: RISQUE DE CHOC ELECTRIQUE-NE PAS OUVRIR

WARNING: TO PREVENT ELECTRIC SHOCK OR FIRE HAZARD, DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS ARE INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL DO NOT EXPOSE THIS APPLIANCE TO WATER OR MOISTURE.

ATTENTION	L'APPAREIL NE DOIT ETRE OUVERT QUE PAR UN SPEDIALISTE	
ACHTUNG DAS GERA DARF NUR VOM FACHMANN GEOFNET WERDEN		
ATTENZIONE	L'APPARECCHIO DEVE ESSERE APERTO DA UNO SPECIALISTA	
ATENCION	ESTE APARATO DEBE SER ABIERTO POR UN TENICO ESPECIALIZADO	

WARNING REFER INTERNAL SERVICING TO QUALIFIED PERSONNEL



Hot & Cold Water Dispenser

MODEL NO. INFINITE-L

POWER SOURCE.

220 -240V ~ 50/60Hz

HOT: 470W, COLD: 0.8-0.9A

Climatic Class: T

Total mass of refrigerant: 36g

Refrigerant: R-134a

MANUFACTURER:

WGCO Corp. (OLD: Hyundai Wacotec Co., Ltd.)

A-301, Hagye Technotown, 10, Nowon-ro 15-gil, Nowon-gu, Seoul, Korea

MADE IN KOREA

FOR HOUSEHOLD USE









WARNING: SHOCK HAZARD-DO NOT OPEN.
AVIS: RISQUE DE CHOC ELECTRIQUE-NE PAS OUVRIR

WARNING: TO PREVENT ELECTRIC SHOCK OR FIRE HAZARD, DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS ARE INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL DO NOT EXPOSE THIS APPLIANCE TO WATER OR MOISTURE.

WARNING	REFER INTERNAL SERVICING TO QUALIFIED PERSONNEL.
ATTENTION	L'APPAREIL NE DOIT ETRE OUVERT QUE PAR UN SPEDIALISTE
ACHTUNG	DAS GERA DARF NUR VOM FACHMANN GEOFNET WERDEN
ATTENZIONE	L'APPARECCHIO DEVE ESSERE APERTO DA UNO SPECIALISTA
ATENCION	ESTE APARATO DEBE SER ABIERTO POR UN TENICO ESPECIALIZADO

Hot & Cold Water Dispenser

MODEL NO. INFINITE-20

POWER SOURCE.

220 -240V ~ 50/60Hz

HOT: 470W, COLD: 0.8-0.9A

Climatic Class: T

Total mass of refrigerant: 36g

Refrigerant: R-134a

MANUFACTURER:

WOCO Corp. (OLD: Hyundai Wacotec Co., Ltd.) A-301, Hagye Technotown, 10, Nowon-ro 15-gil, Nowon-gu, Seoul, Korea

MADE IN KOREA FOR HOUSEHOLD USE







CAUTION

RISK OF ELECTRIC SHOCK DO NOT OPEN



WARNING: SHOCK HAZARD-DO NOT OPEN. AVIS: RISQUE DE CHOC ELECTRIQUE-NE PAS OUVRIR

WARNING: TO PREVENT ELECTRIC SHOCK OR FIRE HAZARD, DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS ARE INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL DO NOT EXPOSE THIS APPLIANCE TO WATER OR MOISTURE.

WARNING	REFER INTERNAL SERVICING TO QUALIFIED PERSONNEL.
ATTENTION	L'APPAREIL NE DOIT ETRE OUVERT QUE PAR UN SPEDIALISTE
ACHTUNG	DAS GERA DARF NUR VOM FACHMANN GEOFNET WERDEN
ATTENZIONE	L'APPARECCHIO DEVE ESSERE APERTO DA UNO SPECIALISTA
ATENCION	ESTE APARATO DEBE SER ABIERTO POR UN TENICO ESPECIALIZADO



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Hot & Cold Water Dispenser







MODEL NO. INFINITE-L (UF)

POWER SOURCE.

220 -240V ~ 50/60Hz

HOT: 470W, COLD: 0.8-0.9A

Climatic Class: T

Total mass of refrigerant: 36g

Refrigerant: R-134a

MANUFACTURER:

WQCO Corp. A-301, Hagye Technotown, 10, Nowon-ro 15-gil, Nowon-gu, Seoul, Korea

MADE IN KOREA FOR HOUSEHOLD USE



CAUTION

RISK OF ELECTRIC SHOCK DO NOT OPEN



WARNING: SHOCK HAZARD-DO NOT OPEN. AVIS: RISQUE DE CHOC ELECTRIQUE-NE PAS OUVRIR

WARNING: TO PREVENT ELECTRIC SHOCK OR FIRE HAZARD, DO NOT REMOVE COVER, NO USER-SERVICEABLE PARTS ARE INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL. DO NOT EXPOSE THIS APPLIANCE TO WATER OR MOISTURE.

WARNING	REFER INTERNAL SERVICING TO QUALIFIED PERSONNEL.
ATTENTION	L'APPAREIL NE DOIT ETRE OUVERT QUE PAR UN SPEDIALISTE
ACHTUNG	DAS GERA DARF NUR VOM FACHMANN GEOFNET WERDEN
ATTENZIONE	L'APPARECCHIO DEVE ESSERE APERTO DA UNO SPECIALISTA
ATENCION	ESTE APARATO DEBE SER ABIERTO POR UN TENICO ESPECIALIZADO

Hot & Cold Water Dispenser

MODEL NO. INFINITE-S (UF)

POWER SOURCE.

220 -240V ~ 50/60Hz

HOT: 470W, COLD: 0.8-0.9A

Climatic Class: T

Total mass of refrigerant: 36g

Refrigerant: R-134a

MANUFACTURER:

WQCO Corp. A-301, Hagye Technotown, 10, Nowon-ro 15-gil, Nowon-gu, Seoul, Korea

MADE IN KOREA

FOR HOUSEHOLD USE







CAUTION RISK OF ELECTRIC SHOCK

DO NOT OPEN

WARNING: SHOCK HAZARD-DO NOT OPEN. AVIS: RISQUE DE CHOC ELECTRIQUE-NE PAS OUVRIR

WARNING: TO PREVENT ELECTRIC SHOCK OR FIRE HAZARD, DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS ARE INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL DO NOT EXPOSE THIS APPLIANCE TO WATER OR MOISTURE.

WARNING	REFER INTERNAL SERVICING TO QUALIFIED PERSONNEL.			
ATTENTION	L'APPAREIL NE DOIT ETRE OUVERT QUE PAR UN SPEDIALISTE			
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ATENCION	ESTE APARATO DEBE SER ABIERTO POR UN TENICO ESPECIALIZADO			



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Test item particulars:	Hot & Cold Water Dispenser		
Classification of installation and use:	Class I appliance		
Supply Connection:	Type Y attachement		
:			
Possible test case verdicts:			
- test case does not apply to the test object:	N/A		
- test object does meet the requirement:	P (Pass)		
- test object does not meet the requirement:	F (Fail)		
Testing:			
Date of receipt of test item::	2022-09-16		
Date (s) of performance of tests:	2022-10-05 - 2022-10-06		
General remarks:			
"(See Enclosure #)" refers to additional information ap "(See appended table)" refers to a table appended to the			
Throughout this report a \square comma / \boxtimes point is us	sed as the decimal separator.		
Manufacturer's Declaration per sub-clause 4.2.5 of I	ECEE 02:		
The application for obtaining a CB Test Certificate ncludes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) epresentative of the products from each factory has been provided			
When differences exist; they shall be identified in the	-		
Name and address of factory (ies):	WACO Corp. 11-19, Muran 2-gil, Soheul-eup, Pocheon-si, Gyeonggi-do, 11184, Republic of Korea		

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General product information:

The appliance is electric Hot & Cold water Dispenser for household and similar use.

Model difference:

The family models, INFINITE-M, INFINITE-L, INFINITE-20, are identical to the baisc model, INFINITE-S, except for water capacity and product size.

Model	Size (mm) Total water capacity	
INFINITE-S	310 x 381 x 520	4.5
INFINITE-M	310 x 381 x 1025	7
INFINITE-L	310 x 381 x 1200	9
INFINITE-20	310 x 322 x 1025	5

The model INFINITE-L (UF) is exactly same to model INFINITE-L except for Noise Filter, Boost Pump, Solenoid Valve, Micro Switch, Power Supply. The model INFINITE-L (UF) do not incorporate Noise Filter, Boost Pump, Solenoid Valve, Micro Switch, Power Supply adaptor.

The model INFINITE-S (UF) is exactly same to model INFINITE-S except for Noise Filter, Boost Pump, Solenoid Valve, Micro Switch, Power Supply. The model INFINITE-S (UF) do not incorporate Noise Filter, Boost Pump, Solenoid Valve, Micro Switch, Power Supply adaptor.



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	IEC 60335-2-24				
Clause	Requirement + Test		Result - Remark	Verdict	

7	MARKING AND INSTRUCTIONS	MARKING AND INSTRUCTIONS		
7.1	Rated voltage or voltage range (V):	220 – 240 V	Р	
	Symbol for nature of supply, or:	~	Р	
	Rated frequency (Hz):	50/60	Р	
	Rated power input (W), or:	470 W	Р	
	Rated current (A):	0.8-0.9	Р	
	Manufacturer's or responsible vendor's name, trademark or identification mark:	See marking plate	Р	
	Model or type reference:	See marking plate	Р	
	Symbol IEC 60417-5172, for class II appliances	Class I appliance	Р	
	IP number, other than IPX0:		N/A	
	Symbol IEC 60417-5180, for class III appliances, unless		Р	
	the appliance is operated by batteries only, or	No batteries	N/A	
	for appliances powered by rechargeable batteries recharged in the appliance		N/A	
	Symbol IEC 60417-5018, for class II and class III appliances incorporating a functional earth		N/A	
	Symbol IEC 60417-5036, for the enclosure of electrically-operated water valves in external hosesets for connection of an appliance to the water mains, if the working voltage exceeds extra-low voltage		N/A	
	Power input of heating systems, if greater than 100 W, (W) (IEC 60335-2-24)	Marking on the label	Р	
	Defrosting input, in W, if greater than the rated power input, (W) (IEC 60335-2-24)	No defrosting system	N/A	
	Rated power input in Watts (IEC 60335-2-24)	Marking on the label	Р	
	Rated current in Amperes for compression-type appliances (IEC 60335-2-24)	Marking on the label	Р	
	Climatic class of the appliance (SN, N, ST or T) (IEC 60335-2-24)	Т	Р	
	Maximum rated input of lamps in Watts (IEC 60335-2-24)	No lamp	N/A	
	Not applicable if the lamps can only be replaced by the manufacturer or service (IEC 60335-2-24)		N/A	



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	Page 11 of 38 IEC 60335-2-24	Report No.: Attachment of 5025	
Clause	Requirement + Test	Result - Remark	Verdict
	Total mass of the refrigerant (IEC 60335-2-24)	36 g	Р
	For a single component refrigerant, at least one of th (IEC 60335-2-24):	ne following	_
	- the chemical name		N/A
	- the chemical formula		N/A
	- the refrigerant number	R-134a	Р
	For a blended refrigerant, at least one of the following	g (IEC 60335-2-24):	
	- the chemical name and nominal proportion of each of the components	Non-blended refrigerant	N/A
	- the chemical formula and nominal proportion for each of the components		N/A
	- the refrigerant numbers and nominal proportion of each of the components		N/A
	- the refrigerant number of the refrigerant blend		N/A
	The chemical name or refrigerant number of the insulation blowing gas (IEC 60335-2-24)		N/A
	Battery voltage for appliances which can be mains and battery operated (IEC 60335-2-24)		N/A
	Max. power input for incorporated ice-maker, if greater than 100 W (IEC 60335-2-24)		N/A
	Ice-makers shall be marked with the maximum permissible water level (IEC 60335-2-24)		N/A
	Compression-type refrigerating systems appliance shall be marked with mass of the refrigerant for each separate refrigerant circuit (IEC 60335-2-24)		N/A
	Compression-type appliances flammable which use refrigerants shall be marked the symbol ISO 7010 W021(IEC 60335-2-24)		N/A
	Appliances employing R-744 in a transcritical refrige with the substance of the following: (IEC 60335-2-24		_
	Warning: System contains refrigerant under high pressure. Do not tamper with the system. It must be serviced by qualified persons only.	No transcritical refrigeration system	N/A
	Appliances employing R-744 in a transcritical refrigeration system shall be marked with symbol ISO 7000 – 1701 (2004-01). (IEC 60335-2-24)		N/A



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	IEC 60335-2-24			
Clause	Requirement + Test		Result - Remark	Verdict

10	POWER INPUT AND CURRENT		
10.1	Power input at normal operating temperature, rated voltage and normal operation not deviating from rated power input by more than shown in table 1:	(see appended table)	Р
	If the power input varies throughout the operating cycle and the maximum value of the power input exceeds, by a factor greater than two, the arithmetic mean value of the power input occurring during a representative period, the power input is the maximum value that is exceeded for more than 10 % of the representative period		N/A
	Otherwise the power input is the arithmetic mean value		Р
	Test carried out at upper and lower limits of the ranges for appliances with one or more rated voltage ranges, unless		N/A
	the rated power input is related to the arithmetic mean value		Р
	Appliances being operated under normal operation, user adjustable temperature controls are set to give the lowest temperature (IEC 60335-2-24)	No adjustable temperature controls	N/A
	The power input stabilized, steady conditions established (IEC 60335-2-24)		Р
	A period between the making and the breaking of the temperature control, or highest and lowest values of power input measured excluding starting power input but including the power input of the incorporated ice-maker, if any (IEC 60335-2-24)		N/A
10.2	Current at normal operating temperature, rated voltage and normal operation not deviating from rated current by more than shown in table 2:	(see appended table)	Р
	If the current varies throughout the operating cycle and the maximum value of the current exceeds, by a factor greater than two, the arithmetic mean value of the current occurring during a representative period, the current is the maximum value that is exceeded for more than 10 % of the representative period		N/A
	Otherwise the current is the arithmetic mean value		N/A
	Test carried out at upper and lower limits of the ranges for appliances with one or more rated voltage ranges, unless		Р
	the rated current is related to the arithmetic mean value of the range		N/A



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	Page 13 of 38 IEC 60335-2-24	Report No.: Attachment of 502	203735 002
Clause	Requirement + Test	Result - Remark	Verdict
	The appliance being operated under normal operation, user adjustable temperature controls are set to give the lowest temperature (IEC 60335-2-24)		N/A
	The appliance is operated for 1 h. The max. value of the current averaged over any 5 min period is obtained. The interval shall not exceed 30 s. Starting after 1 min (IEC 60335-2-24)		N/A
10.101	The power input of the defrosting system, deviation shown in Table 1 (IEC 60335-2-24)	No defrosting system	N/A
10.102	The power input of any heating system, deviation shown in Table 1 (IEC 60335-2-24)		Р
11	HEATING		_
11.1	No excessive temperatures in normal use		Р
	If the winding temperatures of motor-compressors exceed the values given in Table 101, compliance is checked by the test of 11.101 (IEC 60335-2-24)	Certified motor-compressor	N/A
	The winding temperatures of motor-compressors conforming IEC 60335-2-34 (incl. Annex AA) are not measured (IEC 60335-2-24)	Certified motor-compressor (See appended table 24)	N/A
11.2	Placing and mounting of appliance as described (IEC 60335-2-24)		Р
11.3	Temperature rises, other than of windings, determined by thermocouples		Р
	Temperature rises of windings determined by resistance method, unless		Р
	the windings are non-uniform or it is difficult to make the necessary connections		Р
11.4	Heating appliances operated under normal operation at 1.15 times rated power input (W):		N/A
11.5	Motor-operated appliances operated under normal operation at most unfavourable voltage between 0.94 and 1.06 times rated voltage (V):		N/A
11.6	Combined appliances operated under normal operation at most unfavourable voltage between 0.94 and 1.06 times rated voltage (V):	220 x 0.94 = 206.8 240 x 1.06 = 254.4	Р
11.7	Operation duration corresponding to the most unfavourable conditions of normal use		Р
	The appliances is operated until steady conditions are established (IEC 60335-2-24)		Р
_			



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	IEC 60335-2-24				
Clause	Requirement + Test	Result - Remark	Verdict		
11.8	Temperature rises monitored continuously and not exceeding the values in table 3:		Р		
	If the temperature rise of a motor winding exceeds the value of table 3, or		N/A		
	if there is doubt with regard to classification of insulation,		N/A		
	tests of Annex C are carried out		N/A		
	Sealing compound does not flow out		Р		
	Protective devices do not operate, except		Р		
	components in protective electronic circuits tested for the number of cycles specified in 24.1.4		N/A		
	During the test protective devices do not operate (IEC 60335-2-24)		Р		
	During the test sealing compound doesn't flow out (IEC 60335-2-24)		Р		
	During the test temperatures are monitored continuously (IEC 60335-2-24)		Р		
	For (SN) and (N) class, the temperature rises not exceeding values in Table 3 (IEC 60335-2-24)		N/A		
	For (ST) and (T) class, the temperature rises not exceeding values in Table 3 reduced by 7 K (IEC 60335-2-24)		Р		
	For motor-compressors not conforming to IEC 60335 temperatures of (IEC 60335-2-24)	5-2-34 (incl. its Annex AA), the	_		
	- housings of motor-compressors and	Motor compressor certified by Nemko	N/A		
	- windings of motor-compressors		N/A		
	shall not exceed the values given in Table 101		N/A		
	For motor-compressors conforming to IEC 60335-2-34 (including its Annex AA), the temperatures are not measured (IEC 60335-2-24)		N/A		
	The temperature rise of the external enclosure of mo applicable for: (IEC 60335-2-24)	otor-operated appliances not	_		
	-built-in appliances		N/A		
	-other appliances (distance from a wall < 75 mm)		Р		
	-max. temperature rises specified in Table 101		N/A		



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Olavia		Danik Damada	Mandiat	
Clause	Requirement + Test	Result - Remark	Verdict	
	The temperature of ballast windings and their associated wiring shall not exceed the values specified in 12.4 of IEC 60598-1, when measured under the conditions stated (IEC 60335-2-24)	No ballast windings	N/A	
11.101	If the temperatures exceed the limits, the test is carri (IEC 60335-2-24):	ed out again	_	
	-winding temperatures at the end of a running cycle not higher than the limits given in Table 101	Motor compressor certified by Nemko	N/A	
11.102	Any defrosting system, temperature rises don't exceed the values given in 11.8 (IEC 60335-2-24)	No defrosting system	N/A	
	Manual defrosting (IEC 60335-2-24)		N/A	
	Automatic defrosting (IEC 60335-2-24)		N/A	
11.103	Heating systems, other than defrosting, temperature rises don't exceed the values given in 11.8 (IEC 60335-2-24)	Complied	Р	
13	LEAKAGE CURRENT AND ELECTRIC STRENGTH AT OPERATING TEMPERATURE			
13.1	Leakage current not excessive and electric strength adequate		Р	
	Heating appliances operated at 1.15 times the rated power input (W):		N/A	
	Motor-operated appliances and combined appliances supplied at 1.06 times the rated voltage (V):		Р	
	Protective impedance and radio interference filters disconnected before carrying out the tests		Р	
	The test of 13.2 does not apply to battery circuit (IEC 60335-2-24)		N/A	
13.2	The leakage current is measured by means of the circuit described in Figure 4 of IEC 60990:1999		Р	
	For class 0I appliances and class I appliances, except parts of class II construction, C may be replaced by a low impedance ammeter		Р	
	Leakage current measurements:	(see appended table)	Р	
	Leakage current measurements and limits (IEC 60335-2-24)	(see appended table)	Р	
13.3	The appliance is disconnected from the supply		Р	
	Electric strength tests according to table 4:	(see appended table)	Р	
	No breakdown during the tests		Р	



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	IEC 60335-2-24			
Clause	Requirement + Test	Result - Remark	Verdict	
	The test voltage for reinforced insulation is applied between separate circuits for battery operation and mains supply operation (IEC 60335-2-24)	No such part	N/A	
24	COMPONENTS		_	
24.1	Components comply with safety requirements in relevant IEC standards	Complying with IEC or equivalent standard	Р	
	List of components:	(see appended table)	Р	
	Motors not required to comply with IEC 60034-1, they are tested as part of the appliance		N/A	
	Relays tested as part of the appliance, or		N/A	
	alternatively acc. to IEC 60730-1, and meeting the additional requirements in IEC 60335-1		N/A	
	The requirements of Clause 29 apply between live parts of components and accessible parts of the appliance		Р	
	Components can comply with the requirements for clearances and creepage distances for functional insulation in the relevant component standard		Р	
	30.2 of this standard apply to parts of non-metallic material in components including parts of non-metallic material supporting current-carrying connections		Р	
	Components that have not been previously tested to comply with the IEC standard for the relevant component are tested according to the requirements of 30.2		Р	
	Components that have been previously tested to comply with the resistance to fire requirements in the IEC standard for the relevant component need not be retested provided the specified conditions are met		Р	
	If these conditions are not satisfied, the component is tested as part of the appliance.		Р	
	Power electronic converter circuits not required to comply with IEC 62477-1, they are tested as part of the appliance		N/A	
	If components have not been tested and found to comply with relevant IEC standard for the number of cycles specified, they are tested in accordance with 24.1.1 to 24.1.9		Р	
	For components mentioned in 24.1.1 to 24.1.9 no additional tests specified in the relevant component standard are necessary other than those specified in 24.1.1 to 24.1.9		Р	



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	IEC 60335-2-24		
Clause	Requirement + Test	Result - Remark	Verdict
	Components not tested and found to comply with relevant IEC standard and components not marked or not used in accordance with its marking, tested under the conditions occurring in the appliance		Р
	Lampholders and starterholders that have not being tested and found to comply with the relevant IEC standard, tested as a part of the appliance and additionally according to the gauging and interchangeability requirements of the relevant IEC standard		N/A
	No additional tests specified for nationally standardized plugs such as those detailed in IEC/TR 60083 or connectors complying with the standard sheets of IEC 60320-1 and IEC 60309		Р
	Motor-compressors are not required to be separately tested according to (IEC 60335-2-34) nor are they required to meet the requirements of (IEC 60335-2-34) if they meet the requirements of this standard (IEC 60335-2-24)		Р



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	IEC 60335-2-24				
Clause	Requirement + Test		Result - Remark	Verdict	

10.1	TABLE: Pow	er input deviation	on			Р
Input devia	tion of/at:	P rated (W)	P measured (W)	ΔΡ	Required Δ P	Remark
220 V 50 H	Z	-	430.1	-		-
220 V 60 H	Z	-	432.7	-		-
230 V 50 H	Z	470	472.8	+ 0.59 %	+5 % or 20 W - 10 %	-
230 V 60 H	Z	470	473.2	- 0.68 %	+5 % or 20 W - 10 %	-
240 V 50 H	Z	-	515.1	-		-
240 V 60 H	Z	-	515.1	-		-

10.2	TABLE: Curre	ent deviation				Р
Current dev	viation of/at:	I rated (A)	I measured (A)	ΔΙ	Required Δ I	Remark
220 V 50 Hz	<u> </u>	0.8	0.640	- 20.0 %	+ 20 %	-
220 V 60 Hz	Z	0.8	0.597	- 25.3 %	+ 20 %	-
230 V 50 Hz	Z	-	0.706	-	-	-
230 V 60 Hz	Z	-	0.606	-	-	-
240 V 50 Hz	Z	0.9	0.696	- 22.6 %	+ 20 %	-
240 V 60 Hz	Z	0.9	0.610	- 32.2 %	+ 20 %	-
Supplement - Cold Mode	ary information:			1		

11.8	TABLE: Heating test			Р	
	Test voltage (V)	·····::	206.8 \	/ / 254.4	_
	Ambient (°C)::		42.9 °C / 43.4 °C		_
Thermocouple locations:		Max. tempe measured		Max. temperate limit, Δ T	
Power cord		9.4 /	13.8	50-15	;



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	IEC 60335-2-24						
Clause	Requirement + Test		Result - Remark	Verdict			

	1	T
Power input connector	9.5 / 13.4	Cl.30.1
Switch(heater on/off)	8.6 / 11.1	80(105-25)-15
Thermostat (for comp)	12.0 / 16.6	45(70-25)-15
Fuse holder	10.6 / 14.3	Cl.30.1
Connector (CN1)	7.2 / 11.6	Cl.30.1
PCB surface	15.1 / 21.6	120-15
OLP cover	16.3 / 35.4	Cl.30.1
Compressor body	51.4 / 52.1	108(140-25-7)
Internal wire for compressor	21.5 / 24.4	175(200-25)-15
Bimetal_self resetting (for hot water tank)	36.8 / 38.8	175(200-25)-15
Bimetal_non-self resetting (for hot water tank)	34.2 / 34.7	175(200-25)-15
Front enclosure	1.1 / 0.6	Cl.30.1
Top enclosure	1.4 / 1.3	Cl.30.1
Test corner	5.5 / 8.0	65-15
Ambient	42.7 °C / 43.6 °C	-

Supplementary information:
The values of Table 3 are reduced by 15 K due to climatic class (T).

11.8	TABLE: Heating test, resistance method						Р
	Test voltage (V):				, 2) 254.4 V		
	Ambient, t1 (°C):				2.7 °C		_
	Ambient, t2 (°C):				13.6 °C		
Temperature rise of winding: R1 (Ω)		R1 (Ω)	R2 (Ω)	Δ T (K)	Max. Δ T (K)		ulation class
206.8 V							
Main windin	g	23.56	31.45	91.9	108	sy	nthetic
Auxiliary winding 45.02		45.02	60.40	93.8	108	sy	nthetic
254.4 V							



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		IE	C 60335-2-24				
Clause	Requirement + Test			Result - R	emark	Ver	dict

Main winding	23.56	31.50	93.9	108	synthetic	
Auxiliary winding	45.02	60.50	95.8	108	synthetic	
Supplementary information:						

13.2	TABLE: Leakage current			
	Heating appliances: 1.15 x rated input (W):	-		_
	Motor-operated and combined appliances: 1.06 x rated voltage (V):	254.4 V		_
Leakage current between:		I (mA)	Max. allowe	ed I (mA)
Supply conductor and metallic enclosure		0.156	0.75	5
Supply conductor and non-metallic enclosure with foil		0.006	0.35 (peak)	
Suppleme	ntary information:	I	I	

13.3	TABLE: Dielectric strength				
Test voltage	e applied between:	Test potential applied (V)	Breakdown / f (Yes/N		
Supply cond	uctors and metallic enclosure	1 000	No		
Supply cond	uctors and non-metallic enclosure with foil	3 000	No		
Supplementa	ary information:				



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		IEC 60335-2-24		
Clause	Requirement + Test		Result - Remark	Verdict

24.1 TAE	BLE: Critical compo	nents informati	on		Р
Object/ part No.	Manufacturer/ trademark	Type/ model	Technical data	Standard	Mark(s) of conformity1)
Power cord	Shangyu Jintao Electron Co., Ltd.	H05VV-F	250 V, 16 A	EN 50525-2-11	VDE (40013419)
Plug		JT003		VDE 0620-2-1	(40021286)
Enclosure	KUMHO PETROCHEMICA L Co., Ltd	ABS-780	НВ	IEC 60335-1 IEC 60335-15 IEC 60335-2-24	Tested in appliance UL (E65424)
Motor- compressor	DEAWOO Compressor Co., Ltd.	DM24LHS8	220-240 V, 50/60 Hz, R134a	IEC 60335-1 IEC 60335-2-34	CQC (CN37290- M2)
Thermostat for compressor	Pacific Controls Co., Ltd.	PFN-135M- 04WA	250 V, 6 A	EN 60730-1 EN 60730-2-9	Intertek (1021371)
PCB	SEO KANG TECH CO., LTD.	SK	V-0	IEC 60335-1 IEC 60335-15 IEC 60335-2-24	Tested in appliance
Noise Filter (For model INFINITE-L, INFINITE-M, INFINITE-S, INFINITE-20 only)	WOONYOUNG CO., LTD.	WYF-S15T1B	250 V a.c. 50/60 Hz 15 A	EN 60939-1 EN 60939-2	TUV SUD (N8 08 07 64308 007)
Boost Pump (For model INFINITE-L, INFINITE-M, INFINITE-S, INFINITE-20 only)	NINGBO PUZE ELECTROMECHA NICAL CO., LTD.	PZ50T	DC 24 V, 0.7 A	IEC 60335-1 IEC 60335-15 IEC 60335-2-24	Tested in appliance
Band Heater	HYUNDAI PRECISION	HDH-01-05- 06	AC 220 V, 430 W	IEC 60335-1 IEC 60335-15 IEC 60335-2-24	Tested in appliance



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	IEC 60335-2-24						
Clause	Requirement + Test		Result - Remark	Verdict			

	1	1		1	1
Solenoid valve (For model INFINITE-L, INFINITE-M, INFINITE-S, INFINITE-20 only)	STORMTEC	HSV-FF-24V	DC 24 V, Class E	IEC 60335-1 IEC 60335-15 IEC 60335-2-24	Tested in appliance
Non-self resetting thermal cut-out	Pacific Controls Co., Ltd.	PTS-13H	AC 250 V, 10 A	EN 60730-1 EN 60730-2-9	TUV SUD (B 18 01 49028 054)
Switch	NINGBO YINXIAN LIHE	RL3T125/55	AC 250 V, 10 A	EN 61058-1	ENEC (SE/09127- 14)
Micro Switch (For model INFINITE-L, INFINITE-M, INFINITE-S, INFINITE-20 only)	WONWOO PRECISION CO., LTD	SZM-V16-FA- 62 S	AC 250, 16 A	IEC 61058-1	VDE (135496)
Thermostat	Pacific Controls Co., Ltd.	PW-3HN	AC 250 V, 10 A	EN 60730-1 EN 60730-2-9	TUV SUD (B 18 01 49028 051)
Fuse	ORISEL CO LTD	N61	250V 7A	IEC 60335-1 IEC 60335-15 IEC 60335-2-24	Tested in appliance UL (E126056)
Power supply (F	or model INFINITE	L, INFINITE-M,	INFINITE-S, INFIN	ITE-20 only)	
Enclosure	ZIBO TUNGKOU CHEMICAL CO LTD	VH-0816T	94 V-0	IEC 60335-1 IEC 60335-15 IEC 60335-2-24	Tested in appliance
Appliance Inlet	UNIONS Electronics Co., Ltd.	SO-222	AC 250 V, 2.5 A	VDE 0625	VDE (40002933)
X2 capacitor	Shenzhen shengxin Capacitor co., ltd.	MEX-X2	AC 280 V, 0.047 uF	IEC 60384-14	VDE (123934)



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		IEC 60335-2-24		
Clause	Requirement + Test		Result - Remark	Verdict

Fuse	Shenzhen lanson electronic Co., ltd.	3K T3.15A250V	AC 250 V, 3.15 A	IEC 60127-1 IEC 60127-3	VDE (40010682)
РСВ	KINGBOARD LAMINATES LTD		94 V-0, 105°C	IEC 60335-1 IEC 60335-15 IEC 60335-2-24	Tested in appliance
Optocoupler	Bright led Electronics corp	BPC-817B	Viso : 5000Vrms	IEC 60747-5-5	VDE (40007240)
Y1 capacitor	Ease electronics co., ltd.	SY	AC 400 V, 1000pF	IEC 60384-14	VDE (104855)
Transformer	GEZHENG	ACT	Class B	IEC 60335-1 IEC 60335-15 IEC 60335-2-24	Tested in appliance

Supplementary information:

1) Provided evidence ensures the agreed level of compliance. See OD-2039
2) For component acceptance see appendix components

³⁾ License available upon request.



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	IEC60335_2_24R_II - ATTACH	MENT	
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT

IEC 60335-2-24

EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES - SAFETY - PART 2-24: PARTICULAR REQUIREMENTS FOR REFRIGERATING APPLIANCES, ICE-CREAM APPLIANCES AND ICE MAKERS

EN 60335-2-24:2010 + A1:2019 + A2:2019 +A11:2020 used in

conjunction with EN 60335 1:2012 + AC:2014 + A11:2014 + A13:2017 + A1:2019 + A14:2019 + A2:2019 + A15:2021

EN 62233:2008 + AC:2008

TRF template used.....: IECEE OD-2020-F2:2020, Ed. 1.1

Attachment Form No. EU_GD_IEC60335_2_24R_II

Attachment Originator....: UL (DEMKO)

Master Attachment: Dated 2022-09-16

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	CENELEC COMMON MODIFICATIONS (EN)		Р
6.1	Delete "class 0" and "class 01"	Class I	N/A
7.1	Single-phase appliances to be connected to the supply mains: 230 V covered	220-240 V	Р
	Multi-phase appliances to be connected to the supply mains: 400 V covered	Not multi-phase appliances	N/A
7.12	The instructions include the substance of the followi	ing:	Р
	- this appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved		Р
	- children not play with the appliance		Р
	- cleaning and user maintenance not be made by children without supervision		Р
	Children aged from 3 to 8 years allowed to load and unload refrigerating appliances. (EN 60335-2-24:2010/A1:2019)		Р
7.Z101	The instructions contain details on the use of the appliance to ensure the safe preservation of foodstuffs. (EN 60335-2-24:2010/A1:2019)		N/A



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	IEC60335_2_24R_II - ATTACHMENT				
Clause	Requirement + Test	Result - Remark	Verdict		
	Manufacturers give details on the most appropriate part in the compartment of the appliance where specific types of food stored, considering the distribution of temperature that can be present in the different compartments of the appliance.		N/A		
	The instructions include the substance of the following	ng:	N/A		
	To avoid contamination of food, please respect the following instructions:		N/A		
	Opening the door for long periods can cause a significant increase of the temperature in the compartments of the appliance		N/A		
	- Clean regularly surfaces that can come in contact with food and accessible drainage systems		N/A		
	- Clean water tanks if they have not been used for 48 h; flush the water system connected to a water supply if water has not been drawn for 5 days		N/A		
	- Store raw meat and fish in suitable containers in the refrigerator, so that it is not in contact with or drip onto other food		N/A		
	- Two-star frozen-food compartments are suitable for storing pre-frozen food, storing or making ice-cream and making ice cubes		N/A		
	- One-, two- and three-star compartments are not suitable for the freezing of fresh food		N/A		
	- If the refrigerating appliance is left empty for long periods, switch off, defrost, clean, dry, and leave the door open to prevent mould developing within the appliance		N/A		
8.1.1	Also test probe 18 of EN 61032 is applied		Р		
	The appliance being in every possible position during the test, except that		Р		
	appliances normally used on the floor and having a mass exceeding 40 kg are not tilted		N/A		
	The force on the probe in the straight position is increased to 10 N when probe 18 is used		Р		
	When using test probe 18 the appliance is fully assembled as in normal use without any parts removed, and		Р		
	parts intended to be removed for user maintenance are also not removed		Р		
8.1.3	Instead of test probe B, test probe 18 and test probe 13, for appliances other than those of class II, test probe 41 of IEC 61032 is applied with a force not exceeding 1 N to live parts of visibly glowing heating elements, all poles of which can be disconnected by a single switching action		Р		



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	IEC60335_2_24R_II - ATTACH	1	
Clause	Requirement + Test	Result - Remark	Verdict
8.2	Compliance is checked by inspection and by applying the test probes of EN 61032 in accordance with the conditions specified in 8.1.1		P
	Test probe B and probe 18 of EN 61032 are applied to built-in appliances and fixed appliances only after installation		N/A
15.1.2	Appliances with an automatic cord reel tested with the cord in the most unfavourable position so that the reeling of the wet cord may affect electrical insulation during operation, the cord not being dried before reeling	No automatic cord reel	N/A
20.2	For appliances having hazardous moving parts, due to their working function, e.g. the needle of a sewing machine, tools of kitchen machines or the blade of an electrical knife, full protection is not possible for performing their intended use		N/A
	When using a test probe similar to test probe B of EN 61032, having a circular stop face and applied with a force of 5N, the accessories and detachable covers are removed		P
	When using test probe 18 it is applied with a force of 2,5N on the appliance fully assembled		Р
22.12	Other parts intended to be detached during use, maintenance or cleaning (e.g. batteries, battery covers, lids, attachments, steam nozzles) are not considered as parts providing a similar function as handles, knobs, grips, levers		N/A
22.17	The requirement is not applicable to built-in appliances	No spacers	N/A
22.40	Ice-cream appliances and ice-makers fitted with an accessible switch to stop all functions of the appliance. (EN 60335-2-24:2010/A1:2019)		N/A
22.44	An appliance is child-appealing if one of the following criteria is present:		N/A
	- appliance decorated using faces, cartoon like characters, or similar images		N/A
	- appliance using shapes representing animals, characters, persons or scale models		N/A
	An appliance is child-appealing if more than one of the following criteria are present:		N/A
	- using non-functional light (functional light is e.g. illumination of an object or area, signal indicating status of an appliance)		N/A
	- using non-functional sound (e.g. music)		N/A
	- using non-functional movement		N/A



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	IEC60335_2_24R_II - ATTACH		
Clause	Requirement + Test	Result - Remark	Verdict
	If the appliance is child-appealing, has a mass less than 4 kg or is mounted or normally intended for use at a height less than 850 mm, the following conditions are met:		N/A
	- surface temperature rise requirements not exceeded		N/A
	- hazardous moving parts not accessible		N/A
	- live parts not accessible		N/A
	- liquid temperature requirement not exceeded,		N/A
	unless for vessels in which two independent and sequential actions are needed to access the liquid		N/A
	- the requirement of 22.12 is applicable for all accessible parts of the appliance		N/A
22.Z101	Drawers of refrigerating appliances provided with sliding devices fitted with stops to prevent them inadvertently falling out. (EN 60335-2-24:2010/A1:2019)		N/A
22.Z102	Appliances constructed so that lubricants are prevented from polluting food compartments (EN 60335-2-24:2010/A1:2019)		N/A
22.Z104	All surfaces that can get in contact with food (including "splash areas") durable, cleanable, without breaks, resistant to cracking, chipping, flaking and abrasion (EN 60335-2-24:2010/A1:2019)		N/A
	NOTE 1 The splash area comprises surfaces on which part of the food can splash or flow during normal use, but this food does not become part of the product (e.g. ice-cream)		N/A
	All other surfaces be durable and cleanable		N/A
	Internal angles, seams and corners that can get in contact with food effectively cleanable		N/A
	Joints that can get in contact with food sealed and hygienic		N/A
	NOTE 2 Guidance can be found in EN 1672-2		N/A
22.Z105	Any internal water dispensing system (EN 60335-2-24:2010/A1:2019)		N/A
	- accessible for cleaning; or		N/A
	- designed to permit manual cleaning or flushing with water or other appropriate liquid in accordance with the manufacturer's instructions		N/A
	The above requirements not applicable to self- cleaning systems or chemical dosing systems.		N/A



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Clause	Requirement + Test	Result - Remark	Verdic
24.1	Components comply with the safety requirements specified in the relevant EN standards as far as they reasonably apply		Р
	Motors are not required to comply with EN 60034- 1, but tested as part of the appliance according to this standard		N/A
	Relays are tested as part of the appliance according to this standard		N/A
	Relays may be alternatively tested to EN 60730-1 and the additional requirements in EN 60335-1		N/A
	The requirements of Clause 29 of this standard apply between live parts of components and accessible parts of the appliance		Р
	Components may comply with the requirements for clearances and creepage distances for functional insulation as specified in the relevant component standard		Р
	The requirements of 30.2 of this standard apply to parts of non-metallic material in components including parts of non-metallic material supporting current-carrying connections inside components		Р
	Components that have not been tested and shown to comply with the EN standard for the relevant component are tested according to the requirements of 30.2 of this standard		Р
	Components that have been tested and shown to correquirements in the EN standard for the relevant corprovided that:		Р
	- the severity specified in the component standard is not less than the severity specified in 30.2, and		Р
	- the test report for the component states the values of $t_{\rm e}$ and $t_{\rm i}$ acc. to EN 60695-2-11		Р
	If the above two conditions are not satisfied, the component is tested as part of the appliance		Р
	Power electronic converter circuits are not required to comply with EN 62477-1, but tested as part of the appliance according to this standard		N/A
	Unless components have been tested and found to comply with the relevant EN standard for the number of cycles specified, they are tested in accordance with 24.1.1 to 24.1.9		Р
	For components mentioned in 24.1.1 to 24.1.9, no additional tests specified in the relevant EN standard for the component are necessary other than those specified in 24.1.1 to 24.1.9		Р
	Components that have not been tested and found to comply with the relevant EN standard, and		Р



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Claura	IEC60335_2_24R_II - ATTACH	<u> </u>	1/ "
Clause	Requirement + Test components that are not marked or not used in accordance with their marking,	Result - Remark	Verdict P
	are tested in accordance with the conditions occurring in the appliance, the number of samples being that required by the relevant standard		Р
	Lamp-holders and starter-holders that have not been tested and found to comply with the relevant EN standard are tested as a part of the appliance and additionally comply with the gauging and interchangeability requirements of the relevant EN standard under the conditions occurring in the appliance	No lamp-holders	N/A
	Where the relevant EN standard specifies these gauging and interchangeability requirements at elevated temperatures, the temperatures measured during the tests of Clause 11 are used		N/A
	There are no additional tests specified for nationally standardized plugs such as those detailed in IEC/TR 60083 or connectors complying with the standard sheets of EN 60320-1 and EN 60309, unless they are specifically mentioned in the text of this standard		N/A
	Plugs and socket-outlets and other connecting devices of interconnection cords are not interchangeable with plugs and socket-outlets listed in IEC/TR 60083 or IEC 60906-1, or		N/A
	with connectors and appliance inlets complying with the standard sheets of EN 60320-1, if		N/A
	direct supply to these parts from the supply mains gives rise to a hazard		N/A
	For plugs used in CENELEC countries Annex ZH applies		N/A
24.1.7	When the remote operation of the appliance is via a telecommunication network, the relevant standard for the telecommunication interface circuitry in the appliance is EN 41003	Not remote operated appliance	N/A
	If the remote operation of the appliance is via a telecommunication network, the relevant standard for the telecommunication interface circuitry in the appliance is IEC 62151. (EN 60335-1:2012/A15:2021)		N/A
24.Z1	Type S2 and S3 capacitors according to EN 60252-1 are not required to undergo the testing as required by 30.2.2 and 30.2.3.1	No motor capacitors	N/A
25.1	Plugs and pins for insertion into socket outlets follow the relevant standards sheets in Annex ZH		Р
25.7	Rubber sheathed cords (60245 IEC 53) are not suitable for appliances intended to be used outdoors, or		N/A



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No.: Attachment of 50253	735 002
-	
lt - Remark	Verdict
	N/A
	N/A
	N/A
	N/A
	Р
ossibility of damaging the ation during installation	N/A
	Р
	Р
	N/A
_	



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	IEC60335_2_24R_II - ATTACHN	MENT	
Clause	Requirement + Test	Result - Remark	Verdict
	Denmark		N/A
22.47	The maximum inlet water pressure is at least 1,0 MPa:		N/A
	Ireland and United Kingdom		N/A
25.8	In the table, the line >10 A and ≤16 A is replaced with:		N/A
	> 10 and ≤ 13 1,25 (1,0) ^b		N/A
	> 13 and ≤ 16 1,5 (1,0) ^b		N/A
ZB	ANNEX ZB (INFORMATIVE)		N/A
	A-DEVIATIONS		IN/A
	Ireland		N/A
25.1 and 25.25	These regulations apply to all plugs for domestic use at a voltage of not less than 200 V and in general allow only plugs complying with I.S. 401:1997, or equivalent, to be fitted to domestic appliances		N/A
	United Kingdom		N/A
25.1 and 25.25	These regulations apply to all plugs for domestic use at a voltage of not less than 200 V and in general allow only plugs to BS 1363 to be fitted to domestic appliances.		N/A
	It also allows plugs to BS 4573 and EN 50075 to be fitted to shavers and toothbrushes		N/A
ZC	ANNEX ZC (NORMATIVE) NORMATIVE REFERENCES TO INTERNATIONAL I CORRESPONDING EUROPEAN PUBLICATIONS	PUBLICATIONS WITH THEIR	Р
	A list of documents referred to in the text of this standard in such a way that some or all of their content constitutes requirements of this document		Р
ZD	ANNEX ZD (INFORMATIVE) IEC and CENELEC CODE DESIGNATIONS FOR F	LEXIBLE CORDS	Р
	List of IEC and CENELEC code designations for flexible cords		Р



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Clause	Requirement + Test	Result - Remark	Verdict
ZE	ANNEX ZE (INFORMATIVE) SPECIFIC ADDITIONAL REQUIREMENTS FOR AF INTENDED FOR COMMERCIAL USE	PPLIANCES AND MACHINES	N/A
7.1	Business name and full address of the manufacturer and, where applicable, his authorized representative:	No commercial use	N/A
	Model or type reference:		N/A
	Serial number, if any		N/A
	Production year		N/A
	Designation of the appliance:		N/A
7.12	Instructions provided with the appliance so that the appliance can be used safely		N/A
	The instructions contain at least the following inform	nation:	N/A
	- the business name and full address of the manufacturer and, where applicable, his authorized representative		N/A
	- model or type reference of the appliance as marked on the appliance itself, except for the serial number		N/A
	- the designation of the appliance together with its explanation in case it is given by a combination of letters and/or numbers		N/A
	- the general description of the appliance, when needed due to the complexity of the appliance		N/A
	 specific precautions required during installation, operation, adjusting, user maintenance, cleaning, repairing or moving 		N/A
	- when needed drawings, diagrams, descriptions and explanations necessary for the safe use and user maintenance of the appliance		N/A
	- the possible reasonably foreseeable misuse and, whenever relevant, a warning against the effects it may have on the safe use of the appliance		N/A
	The words "Original instructions" appear on the language version(s) verified by the manufacturer or by the authorized representative		N/A
	When a translation of the original instructions has been provided by a person introducing the appliance on the market; the meaning of the sentence "Translation of the original instructions" appear in the relevant instructions delivered with the appliance		N/A
	The instructions for maintenance/service to be done by specialized personnel, mandated by the manufacturer or the authorized representative may be supplied in only one Community language which the specialized personnel understand		N/A



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Clauss	IEC60335_2_24R_II - ATTACH		\/o=d:-4
Clause	Requirement + Test The instructions indicate the type and frequency of inspections and maintenance required for safe operation including the preventive maintenance measures	Result - Remark	Verdict N/A
7.12.ZE1	If needed for specific appliances, the following information to be given:		N/A
	- on use, transportation, assembly, dismantling when out of service, testing or foreseeable breakdowns, if these operations have consequences on stability of the appliance in order to avoid overturning, falling or uncontrolled movements of the appliance or of its component parts		N/A
	- on how to maintain adequate mechanical stability when in use, during transportation, assembly, dismantling, scrapping and any other action involving the appliance		N/A
	- on the protective measures to be taken by the user, including, where appropriate, the personal protective equipment to be provided		N/A
	- on the operating method to be followed in the event of accident or breakdown; if a blockage is likely to occur the operating method to safely unblock the appliance		N/A
	- on the specifications on the spare parts to be used, when these affect the health and safety of the operator		N/A
	- on airborne noise emissions, determined and decl relevant Part 2, which includes:	ared in accordance with the	N/A
	- the A-weighted emission sound pressure level at workstations, where this exceeds 70 dB(A);		N/A
	- where this level does not exceed 70 dB(A), this fact is indicated		N/A
	- the peak C-weighted instantaneous sound pressure value at workstations, where this exceeds 63 Pa (130 dB in relation to 20 μPa)		N/A
	- the A-weighted sound power level emitted by the machinery, where the A-weighted emission sound pressure level at workstations exceeds 80 dB(A)::		N/A
7.12.ZE2	The instructions include a warning to disconnect the appliance from its power source during service and when replacing parts		N/A
	If the removal of the plug is foreseen, it is clearly indicated that the removal of the plug is such that an operator can check from any of the points to which he has access that the plug remains removed		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
	If this is not possible, due to the construction of the appliance or its installation, a disconnection with a locking system in the isolated position is provided		N/A
19.11.4.8	The appliance continues to operate, without causing any hazard to the user, from the same point in its operating cycle at which the voltage fluctuation occurred, or		N/A
	a manual operation is required to restart it		N/A
20.1	Appliances and their components and fittings have adequate mechanical stability during transportation, assembly, dismantling and any other action involving the appliance		N/A
20.2	Dangerous moving transmission parts safeguarded either by design or guards		N/A
	When guards are used, they are fixed guards, interlocking movable guards or protective devices		N/A
	Moving parts directly involved in the function of the made completely inaccessible fitted with:	appliance which cannot be	N/A
	- fixed guards or interlocking movable guards preventing access to those sections of the parts that are not used in the work, and		N/A
	- adjustable guards restricting access to those sections of the moving parts where access is necessary		N/A
	Interlocking movable guards used where frequent access is required		N/A
21.1	Appliances and their components and fittings have adequate mechanical strength and is constructed to withstand such rough handling that may be expected in normal use, during transportation, assembly, dismantling, scrapping and any other action involving the appliance		N/A
22.ZE.1	For appliances provided with a seat, the seat gives adequate stability		N/A
	The distance between the seat and the control devices capable of being adapted to the operator		N/A
22.ZE.2	For appliances provided with separate devices for the start and the stop functions, the stop function is unambiguously identifiable and does always override the start function		N/A
	For appliances provided with one device performing the start and the stop function, the stop function is unambiguously identifiable and does always override the start function		N/A
22.ZE.3	Appliances designed in such a way that incorrect mounting is avoided, if this can lead to an unsafe situation		N/A
	•	•	



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Clause	Requirement + Test Result - Remark	Verdict
	If this is not possible, information on the correct mounting is given directly on the part and/or the enclosure	N/A
22.ZE.4	Where the weight, size or shape prevents appliances from being moved manually, they are fitted with attachments for lifting gear, or	N/A
	so designed that they can be fitted with such attachments, or	N/A
	be shaped in such a way that standard lifting gear can easily be used	N/A
	Appliances to be moved manually are constructed or equipped so that they can be moved easily and safely	N/A
22.ZE.5	The fixing systems of fixed guards which prevent access to dangerous moving transmission parts only removable with the use of tools	N/A
	If such guards have to be removed by the user for routine cleaning or maintenance their fixing systems remain attached to the fixed guards or to the machine after removal	N/A
	Where possible, guards are incapable of remaining in place without their fixings	N/A
	This does not apply if, after removal of the screws, or if the component is incorrectly repositioned, the appliance becomes inoperative	N/A
	Movable guards are interlocked	N/A
	The interlocking devices prevent the start of hazardous appliance functions until the guards are fixed in their position, and give a stop command whenever they are no longer closed	N/A
	Where it is possible for an operator to reach the danger zone before the hazardous appliance functions has ceased, movable guards associated guard locking device in addition to an interlocking device that:	
	- prevents the start of hazardous appliance functions until the guard is closed and locked, and	N/A
	- keeps the guard closed and locked until the risk of injury from the hazardous appliance functions has ceased	N/A
	Interlocking movable guards remain attached to the appliance when open, and	N/A
	they are designed and constructed in such a way that they can be adjusted only by means of an intentional action	N/A
22.ZE.6	Interlocking movable guards designed in such a way that the absence or failure of one of their components prevents starting or stops the hazardous appliance functions	N/A



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	IEC60335_2_24R_II - ATTACHI	WIE141	
Clause	Requirement + Test	Result - Remark	Verdict
	The guard is opened to the extent needed to cause the interlocking to operate and is then closed, the number of operations being defined in the specific Part 2:		N/A
	After this test any defect that may be expected in normal use is applied to the interlock system, including interruption of the supply, only one defect being simulated at a time		N/A
	After these tests the interlock system is fit for further use		N/A
22.ZE.7	Adjustable guards restricting access to areas of the moving parts strictly necessary for the work are:		N/A
	- adjustable manually or automatically, depending on the type of work involved, and		N/A
	- readily adjustable without the use of tools		N/A
22.ZE.8	In case of interruption, re-establishment after an interruption or fluctuation in whatever manner of the power supply, the appliance does not restart		N/A
	However, automatic restarting of the operation is allowed if the appliance may continue to operate, without causing any hazard to the user, from the same point in its operating cycle at which the voltage interruption or fluctuation occurred		N/A
22.ZE.9	Appliances fitted with means to isolate them from all energy sources		N/A
	Such isolators are clearly identified, and		N/A
	they are capable of being locked if reconnection endanger persons		N/A
	After the energy source is disconnected, it is possible to dissipate any energy remaining or stored in the circuits of the appliance without risk to persons		N/A
ZF	ANNEX ZF (INFORMATIVE) CRITERIA APPLIED FOR THE ALLOCATION OF PE STANDARDS IN THE EN 60335 SERIES UNDER LV		Р
	List of standards under CENELEC/TC61 with the allocation under the LVD (Low Voltage Directive) or the MD (Machinery Directive):		Р
ZG	ANNEX ZG (NORMATIVE) UV APPLIANCES		N/A
	The following modifications to this standard apply to appliances having UV emitters	Not UV appliances	N/A



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	IEC60335_2_24R_II - ATTACHMENT	
Clause	Requirement + Test Result - Remark	Verdict
	This annex is not applicable to appliances covered by the scopes of IEC 60335-2-27, IEC 60335-2-59 or IEC 60335-2-109	N/A
7.12.ZG	The instructions for appliances incorporating UVC emitters include the substance of the following: WARNING — This appliance contains a UV emitter. Do not stare at the light source	N/A
32	For appliances incorporating UV emitters the manufacturer delivers a declaration providing evidence that the plastic material exposed to the radiation is UV resistant	N/A
ZH	ANNEX ZH (INFORMATIVE) Common plug and socket-outlet types in CENELEC countries	Р
	In general, supply cords of single-phase appliances having a rated current not exceeding 16 A are fitted with a plug complying with the following standard sheets:	Р
	- for class I appliances or class II appliances with functional earth, standard sheet EU2, EU3 or EU4:	Р
	- for class II appliances, standard sheet EU5, EU6 or EU7:	N/A
	There are exemptions or differences in certain CENELEC countries	Р
ZI	ANNEX ZI (INFORMATIVE) Information on the application of A11:2014 to EN 60335-1:2012 CENELEC CLC/TC 61(SEC)2096A	
	Clarification of the application of parts 2 in conjunction with the 2002 or 2012 version of EN 60335-1	Р
ZZA	ANNEX ZZA (INFORMATIVE) RELATIONSHIP BETWEEN THIS EUROPEAN STANDARD AND THE SAFETY OBJECTIVES OF DIRECTIVE 2014/35/EU [2014 OJ L96] AIMED TO BE COVERED	Р
	This standard provides one means of conforming to safety objectives of Directive 2014/35/EU	Р
	When cited in the Official Journal under that Directive, compliance with the normative clauses of this standard given in Table ZZA.1 confers a presumption of conformity with the safety objectives of that Directive and associated EFTA regulations	Р
	Compliance with this standard in conjunction with Part 1 provides one means of conformity with the safety requirements	Р



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	IEC60335_2_24R_II - ATTACH	HMENT	
Clause	Requirement + Test	Result - Remark	Verdict
ZZB	ANNEX ZZB (INFORMATIVE) RELATIONSHIP BETWEEN THIS EUROPEAN STANDARD AND THE ESSENTIAL REQUIREMENTS OF DIRECTIVE 2006/42/EC AIMED TO BE COVERED		N/A
	This standard provides one means of conforming to essential requirements of EU Directive 2006/42/EC		N/A
	When cited in the Official Journal under that Directive, compliance with the normative clauses of this standard given in Table ZZB.1 confers a presumption of conformity with the essential requirements of that Directive and associated EFTA regulations		N/A
	Compliance with this Part 1 when used together with the relevant Part 2 provides one means of conformity with the essential health and safety requirements (EN 60335-2-24:2010/A2:2019)		N/A
	ANNEX EN 62233:2008 + AC:2008	•	Р
	EMF- ELECTROMAGNETICS FIELDS The tested product also complies with the requirements of EN 62233:2008		P
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	Limit100%	Measured max. : 1.77%	Р