Test Report issued under the responsibility of:

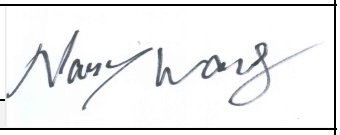
intertek
Total Quality. Assured.

TEST REPORT
IEC 60335-2-2 and IEC 60335-2-10
Household and similar electrical appliances – Safety –
Part 2-2: Particular requirements for vacuum cleaners and water-suction cleaning appliances
Part 2-10: Particular requirements for floor treatment machines and wet scrubbing machines

Report Number..... :	221100426HAN-001
Date of issue ..... :	2022-12-26; Amendment 2:2023-07-27
Total number of pages ..... :	15 pages of test report
Name of Testing Laboratory preparing the Report ..... :	Intertek Testing Services Zhejiang Ltd.
Applicant's name ..... :	
Address..... :	
Test specification:	
Standard ..... :	EN 60335-1:2012 + A11:2014 + A13:2017 + A1:2019 + A14:2019 + A2:2019+A15: 2021 EN 60335-2-2:2010+A11:2012+A1:2013 EN 60335-2-10: 2003 +A1:2008 EN 62233:2008
Test procedure..... :	CE-LVD
Non-standard test method ..... :	N/A
Test Report Form No. ..... :	IEC60335_2_2&10E
Test Report Form(s) Originator .... :	UL(US)
Master TRF ..... :	Dated 2020-03-20

General disclaimer:

The test results presented in this report relate only to the object tested.
This report shall not be reproduced, except in full, without the written approval of the Issuing CB Testing Laboratory. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.

Test item description .....:	Carpet cleaner		
Trade Mark .....:	--		
Manufacturer.....:	Ningbo Dechang Electrical Machinery Made Co. Ltd.		
Model/Type reference .....:	DMW001, DMW006		
Ratings .....:	220-240V~, 50/60Hz, 400W, Class II, IPX4		
Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):			
☒ **Testing Laboratory:**	Intertek Testing Services Zhejiang Ltd.		
Testing location/ address ..... :	Building No.2, Juanhu Science and Technology Innovation Park, No.500 East Shuiyueting Road Haining City, Zhejiang Province, China		
Tested by (name, function, signature) ..... :	Aiden Liu (Engineer)		
Approved by (name, function, signature) .. :	Navy Wang (Reviewer)		
☐ **Testing procedure: CTF Stage 1:**	N/A		
Testing location/ address ..... :	N/A		
Tested by (name, function, signature) ..... :	N/A		
Approved by (name, function, signature) .. :	N/A		
☐ **Testing procedure: CTF Stage 2:**	N/A		
Testing location/ address ..... :	N/A		
Tested by (name + signature) ..... :	N/A		
Witnessed by (name, function, signature). :	N/A		
Approved by (name, function, signature) .. :	N/A		
☐ **Testing procedure: CTF Stage 3:**	N/A		
☐ **Testing procedure: CTF Stage 4:**	N/A		
Testing location/ address ..... :	N/A		
Tested by (name, function, signature) ..... :	N/A		
Witnessed by (name, function, signature). :	N/A		
Approved by (name, function, signature) .. :	N/A		
Supervised by (name, function, signature) :	N/A		

List of Attachments (including a total number of pages in each attachment):

None

Summary of testing:

From the result of our inspection and tests on the submitted samples, we conclude that they **comply** with the requirements of the standards.

Both 50Hz and 60Hz were tested, no difference in performance under 50Hz or 60Hz, only the most unfavourable results record.

Tests performed (name of test and test clause):	**Testing location:**
Refer to page 6.	Intertek Testing Services Zhejiang Ltd. Building No.2, Juanhu Science and Technology Innovation Park, No.500 East Shuiyueting Road Haining City, Zhejiang Province, China

Summary of compliance with National Differences:

List of countries addressed: European group differences.

Statement concerning the uncertainty of the measurement systems used for the tests

(may be required by the product standard or client)

☒ **Internal procedure used for type testing through which traceability of the measuring uncertainty has been established:**

Procedure number, issue date and title:

GMS-QC-12, 2012-07-01, Estimation of Measurement Uncertainty

Calculations leading to the reported values are on file with the NCB and testing laboratory that conducted the testing.

☐ **Statement not required by the standard used for type testing**

(Note: When IEC or ISO standard requires a statement concerning the uncertainty of the measurement systems used for tests, this should be reported above. The informative text in parenthesis should be delete in both cases after selecting the applicable option)

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.

Representative

Note: According to the EU directives which have been aligned with EU NLF (new legislative framework), both of manufacturer and importer's name and address shall be affixed on the product or, where that is not possible, on its packaging or in a document accompanying the product before the product is placed on the EU market.

Test item particulars ..... :	Portable and Household use
Classification of installation and use ..... :	Class II, IPX4
Supply Connection ..... :	Type Y attachment supply cord
..... :	
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 .....:	2023-07-03
Date (s) of performance of tests .....:	2023-07-04 to 2023-07-24

General remarks:

"(See Enclosure #)" refers to additional information appended to the report.
"(See appended table)" refers to a table appended to the report.

Throughout this report a ☒ comma / ☐ point is used as the decimal separator.

Note to TRF users:

This combined Test Report Form does not cover, nor include, any of the requirements for centrally-sited vacuum cleaners or ash vacuum cleaners in IEC 60335-2-2. These types of products are excluded since they are not used in combination with floor treatment and wet scrubbing machines covered by Part -2-10.

This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

Determination of the test conclusion is based on IEC Guide 115 in consideration of measurement uncertainty.

All requirements of IEC 60335-2-2:2009+A1:2012+ A2:2016 may be covered by IEC 60335-2-2:2019.

Manufacturer's Declaration per sub-clause 4.2.5 of IECEE 02:

The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided..... :	☐ **Yes** ☒ **Not applicable**

When differences exist; they shall be identified in the General product information section.

Name and address of factory (ies) .....:	Ningbo Dechang Electrical Machinery Made Co. Ltd. No.18 Yongxing East Road Dongjiao Industrial, Yuyao, Zhejiang, China

General product information:

Model covered by this report is portable carpet cleaner intended for household and indoor use.

All models are the same, just different color and different accessories.

Amendment 2:

The original test report ref No.: 221100426HAN-001, dated on 2022-12-26, with amendment 1 dated on 2023-03-20, was modified on 2023-07-27 to include the following changes and/or additions:

1. Revised motor stator resistance and conducted 1,06 times rated voltage heating test.
2. Added 0,94 times rated voltage heating test.
3. Added new model DMW006 which is the same as DMW001 except different model name used.
4. Updated Pump certificate.

After review, relevant test was conducted.

Clauses concerned: Cl 7.1, Cl10.1, Cl 11, Cl 19.10.

Table concerned: Table 10.1, Table 11.8, Table 24.1.

IEC 60335-2-2 & IEC 60335-2-10			
Clause	Requirement + Test	Result - Remark	Verdict
7	**MARKING AND INSTRUCTIONS**		
7.1	Rated voltage or voltage range (V) ..... :	Refer to copy of marking plate	P
	Symbol for nature of supply, or ..... :	Refer to copy of marking plate	P
	Rated frequency (Hz) ..... :	Refer to copy of marking plate	P
	Rated power input (W), or ..... :	Refer to copy of marking plate	P
	Rated current (A) ..... :		N/A
	The sum of the rated power input and the maximum load of the appliance outlet (W) ..... : (IEC 60335-2-2)		N/A
	Manufacturer's or responsible vendor's name, trademark or identification mark..... :	Refer to copy of marking plate	P
	Model or type reference ..... :	Refer to copy of marking plate	P
	Symbol IEC 60417-5172, for class II appliances		P
	IP number, other than IPX0.....:	IPX4	P
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)	P
	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 exceeded for more than 10 % of the representative period		N/A
	Otherwise the power input 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		N/A
	the rated power input is related to the arithmetic mean value		P
	Power input of motorized cleaning heads measured separately (IEC 60335-2-2)		N/A
	Appliance outlet not loaded when measuring the rated power input (IEC 60335-2-2)		N/A
	Booster settings not used during the measurements (IEC 60335-2-2)		N/A
11	**HEATING**		
11.1	No excessive temperatures in normal use		P

IEC 60335-2-2 & IEC 60335-2-10			
Clause	Requirement + Test	Result - Remark	Verdict
11.2	The appliance is held, placed or fixed in position as described ..... :	Placed on a horizontal support	P
11.3	Temperature rises, other than of windings, determined by thermocouples		P
	Temperature rises of windings determined by resistance method, unless		P
	the windings are non-uniform or it is difficult to make the necessary connections		N/A
	Power input Pi measured with the air-inlet blocked (IEC 60335-2-2)		N/A
	Test probe of figure 105 used to measure temperatures on flat external surfaces (IEC 60335-2-2)		P
	Probe held in place using a laboratory stand clamp or similar device (IEC 60335-2-2)		P
	Measuring instrument giving the same result used (IEC 60335-2-2)		N/A
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) ..... :	1,06 times rated voltage 240V (254,4V) 0,94 times rated voltage 220V (206,8V)	P
	Booster settings activated during test as often as allowed (IEC 60335-2-2)		N/A
	Docking stations of automatic battery-powered cleaners are operated at 0,94 or 1,06 times rated voltage, whichever is the most unfavourable ..... : (IEC 60335-2-2)		N/A
	If a suction mode is incorporated in docking stations of automatic battery-powered cleaners, the test conditions of 3.1.9 are applied ..... : (IEC 60335-2-2)		N/A
11.7	Operation duration corresponding to the most unfavourable conditions of normal use		P
	Until steady conditions established (IEC 60335-2-2)		P
	Appliances incorporating an automatic cord reel operated first during 30 min with one third of cord unreeled (IEC 60335-2-2)		N/A
11.8	Temperature rises monitored continuously and not exceeding the values in table 3 ..... :	(see appended table)	P

IEC 60335-2-2 & IEC 60335-2-10			
Clause	Requirement + Test	Result - Remark	Verdict
	Temperature rises monitored continuously and not exceeding the values in table 101.....: (IEC 60335-2-2)	(see appended table)	N/A
	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		P
	Protective devices do not operate, except		P
	components in protective electronic circuits tested for the number of cycles specified in 24.1.4		N/A
19	**ABNORMAL OPERATION**		
19.10	Series motor operated, air inlet blocked, rotating brushes removed, at 1.3 times rated voltage for 1 min (V)……: (IEC 60335-2-2)	312V	P
	After the test, windings and connections not working loose (IEC 60335-2-2)		P
19.13	During the tests the appliance does not emit flames, molten metal, poisonous or ignitable gas in hazardous amounts		P

IEC 60335-2-2 & IEC 60335-2-10			
Clause	Requirement + Test	Result - Remark	Verdict

10.1	TABLE: Power input deviation				P
Input deviation of/at:	**P rated (W)**	**P measured (W)**	**Δ P**	**Required Δ P**	**Remark**
DMW001	400W	Pf=421 Pi=332 Pm=376,5	-5,8%	+15%	P
Supplementary information: Tested at 230V~, 50Hz, the worst data recorded.					

11.8	TABLE: Heating test (for model DMW001)		P
	Test voltage (V).....:	254,4	—
	Ambient (°C).....:	23,0	—

Thermocouple locations:	**Max. temperature rise measured, Δ T (K)**	**Max. temperature rise limit, Δ T (K)**
Supply cord	6,7	50
Ambient of switch	18,9	95(T120)
Switch surface	12,2	60
Internal wire	11,6	65(T90)
Motor cover	27,2	For CL.30
Brush holder	53,8	For CL.30
Internal enclosure top	21,9	For CL.30
Internal enclosure bottom	30,8	For CL.30
Pump	71,8	140
X2 capacitor	16,3	60(T85)
Y capacitor	15,1	60(T-25)
Wire connector	14,6	80(T-25)
PCB	17,8	120
Handle	2,6	60
External enclosure	15,3	60
Test corner	16,7	65
Supplementary information: N/A		

11.8	TABLE: Heating test, resistance method (for model DMW001)		P
	Test voltage (V).....:	254,4	—
	Ambient, t1 (°C) .....:	23,0	—

IEC 60335-2-2 & IEC 60335-2-10			
Clause	Requirement + Test	Result - Remark	Verdict

	Ambient, t2 (°C) .....:		23,0			—
Temperature rise of winding:		**R1 (Ω)**	**R2 (Ω)**	**Δ T (K)**	**Max. Δ T (K)**	**Insulation class**
Stator		5,527	7,052	71,1	115	155
Rotor(7pcs)		6,810	8,960	81,3	115	155

11.8	**TABLE: Heating test (for model DMW001)**			P
	Test voltage (V)..... .....:		206,8	—
	Ambient (°C).....:		23,0	—
Thermocouple locations:		**Max. temperature rise measured, Δ T (K)**	**Max. temperature rise limit, Δ T (K)**	
Supply cord		4,5	50	
Ambient of switch		12,6	95(T120)	
Switch surface		9,1	60	
Internal wire		10,3	65(T90)	
Motor cover		19,2	For CL.30	
Brush holder		46,9	For CL.30	
Internal enclosure top		18,4	For CL.30	
Internal enclosure bottom		27,9	For CL.30	
Pump		49,5	140	
X2 capacitor		9,8	60(T85)	
Y capacitor		7,4	60(T-25)	
Wire connector		6,9	80(T-25)	
PCB		9,4	120	
Handle		2,4	60	
External enclosure		13,1	60	
Test corner		11,5	65	
Supplementary information: N/A				

11.8	**TABLE: Heating test, resistance method (for model DMW001)**		P
	Test voltage (V).....:	206,8	—
	Ambient, t1 (°C) .....:	23,0	—
	Ambient, t2 (°C) .....:	23,0	—

IEC 60335-2-2 & IEC 60335-2-10			
Clause	Requirement + Test	Result - Remark	Verdict

Temperature rise of winding:	R1 (Ω)	R2 (Ω)	Δ T (K)	Max. Δ T (K)	Insulation class
Stator	5,527	6,783	58,5	115	155
Rotor(7pcs)	6,810	8,717	72,1	115	155

24.1	TABLE: Components information				P
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity[1])
Plug	YUYAO GUOYI ELECTRIC APPLIANCE CO LTD	G02	250V~ 16A DIN 49406-R	DIN VDE 0620-2-1	VDE*/ 40034274
Alternative	Yuyao Yonglian Electrical Industry Co., Ltd.	YL003	250V~ 16A DIN 49406-R	DIN VDE 0620-2-1	VDE*/ 40013942
Alternative	Ningbo Jiulian Wire Co.,Ltd	JL-201	250V~ 16A DIN 49406-R	DIN VDE 0620-2-1	VDE*/ 126375
Plug for SAA	Yuyao Yonglian Electrical Industry Co., Ltd.	YL010A	10A 250V~	AS/NZS 3112 AS/NZS 3100	SAA212339 EA
-alternative	YUYAO GUOYI ELECTRIC APPLIANCE CO LTD	G20A	10A 250V~	AS/NZS 3112 AS/NZS 3100	SAA111685 EA
-alternative	Ningbo jiulian Wire Co., Ltd.	JL004S3	10A 250V~	AS/NZS 3112	NSW19273
-alternative	Zhejiang Jinting Nuclear Cable Co., Ltd	A3-10, A3-10B	10A 250V~	AS/NZS 3112	ESO170417
Plug for SASO	YUYAO GUOYI ELECTRIC APPLIANCE CO LTD	G24	13A MAX.250V~	SASO 2203;2018	RZKSA 221326612
-alternative	Yuyao Yonglian Electrical Industry Co., Ltd.	YL018	13A MAX.250V~	SASO 2203;2018	CN-GSOG-20180229R2
Plug for South Africa	YELLOWSTAR TRADING(PTY)LTD	YL016	250V~ 16A	VC8008	0000001 54569/001
-alternative	YELLOWSTAR TRADING(PTY)LTD	YL017	250V~ 6A	VC8008	0000001 54522/001
BS Plug[1)]	Yuyao Yonglian Electrical Industry Co., Ltd.	YL018	250V~	BS 1363-1	ASTA*/962
-alternative	YUYAO GUOYI ELECTRIC APPLIANCE CO LTD	G24	250V~	BS 1363-1	ASTA*/1114

IEC 60335-2-2 & IEC 60335-2-10			
Clause	Requirement + Test	Result - Remark	Verdict

-alternative	Ningbo Jiulian Wire Co.,Ltd	JL302C, JL302D	250V~	BS 1363-1	ASTA*/866
-alternative	Zhejiang Jinting Nuclear Cable Co., Ltd	JT006A	250V~	BS1 363-1	ASTA LIC.1120
[1)]: The rating of BS fuse-links shall be employed according to table 2 of BS 1363-1:2016+A1:2018					
Power cord	Yuyao Yonglian Electrical Industry Co., Ltd.	H05VVH2-F	2x0,75mm²	EN 50525-2-11	VDE*/40006992
-alternative	YUYAO GUOYI ELECTRIC APPLIANCE CO LTD	H05VVH2-F	2x0,75mm²	EN 50525-2-11	VDE*/40033030
Alternative	Ningbo Jiulian Wire Co., Ltd.	H05VVH2-F	2x0,75mm²	EN 50525-2-11	VDE*/106428
Alternative	Zhejiang Jinting Nuclear Cable Co., Ltd	H05VVH2-F	2x0,75mm²	EN 50525-2-11	VDE*/40013419
Power cord for SAA	Yuyao Yonglian Electrical Industry Co., Ltd.	H05VVH2-F	2x0,75mm²	AS/NZS 3191	SAA211001EA
-alternative	YUYAO GUOYI ELECTRIC APPLIANCE CO LTD	H05VVH2-F	2x0,75mm²	AS/NZS 60227.5	SAA111558EA
-alternative	Yuyao Jiulian Electric Wire Co. Ltd	H05VV-F	2x0,75mm²	AS/NZS 60227.5	NSW15342
-alternative	Zhejiang Jinting Nuclear Cable Co., Ltd	H05VVH2-F	2x0,75mm²	AS/NZS 3191	ESV170111
PCB	SHANGHAI GLOBAL ELECTRONIC MATERIAL LTD	ILM-R1	130℃, V-0, Thickness min: 1.4mm (E224772)	EN 60335-1 EN 60335-2-2 EN 60335-2-10	Tested with appliance
-alternative	DONGGUAN HUIXINPU CIRCUIT CO LTD	HXP-8	130℃, V-0, Thickness min: 1.6mm (E352848)	EN 60335-1 EN 60335-2-2 EN 60335-2-10	Tested with appliance
Switch	SHAOXING HONGFA ELECTRON CO LTD	KAN-L3	12(10)A, 250V~, 1E4, T120	EN 61058-1	TUV*/R 50557508
X2 capacitor	Tenta Electric Industrial Co. Ltd.	MEX	275V~, 0,22 μF X2 40/100/21/C	EN 60384-14	VDE*/119119
-alternative	AID ELECTRONICS CORP	MEX	275V~, X2,0,22μF, 40/085/21/C	EN 60384-14	VDE*/40028973
Y2 capacitor	Jyh Chung Electronic Co., Ltd	JY	300VAC, 222M, Y2, 40/85/21	EN 60384-14	VDE*/123326

IEC 60335-2-2 & IEC 60335-2-10			
Clause	Requirement + Test	Result - Remark	Verdict

Motor	Ningbo Dechang electrical machinery made CO. Ltd	YDC58	220-240V, 50/60Hz, Class155	EN 60335-1 EN 60335-2-2 EN 60335-2-10	Tested with appliance
Pump	**Ningbo Jiayin Electro Mechanical Technology Co., Ltd**	**JYPC-2**	**AC220-240V, 50/60Hz 16W, Class 180(H)**	**EN 60335-1**	**TUV/ R 50340433**
Internal wire	Yuyao Zhenhua Wire & Cable Co Ltd	H05V2-K	1x 0,75mm²	DIN EN 50525-2-31	VDE*/ 40052086
Alternative	Ningbo Haoguang Electric Appliance Co.,Ltd	H05V-K	1x 0,75mm²	DIN EN 50525-2-31	VDE*/ 126062
Alternative	Xiangshan Fahua Electric Wire & Cable Co Ltd	H05V-K	1x 0,75mm²	DIN EN 50525-2-31	VDE*/ 40031495
Alternative	Zhejiang Jinting Nuclear Cable Co.,Ltd.	H05V-K	1x 0,75mm²	DIN EN 50525-2-31	VDE*/ 40033762
Alternative	Yuyao Zhenhua Wire & Cable Co Ltd	1015	600V, T105, min.18AWG (E235204)	EN 60335-1 EN 60335-2-2 EN 60335-2-10	Tested with appliance
Alternative	Ningbo Daqian New Materials Technology Co Ltd	1015	600V, T105, min.18AWG (E525405)	EN 60335-1 EN 60335-2-2 EN 60335-2-10	Tested with appliance
Wire connector	Heavy Power Co Ltd	CE2, CE2X	Rated min. 85°C, 300V (UL/E113650)	EN 60335-1 EN 60335-2-2 EN 60335-2-10	Tested with appliance
Motor thermal protector (Optional)	Jiangsu Meikai Electric Co., Ltd.	17AM-M115B+PTC	250V~, T110, T115, T120	EN 60730-1 EN 60730-2-22	VDE*/40030600
Alternative	Jiangsu Changsheng Electric Appliance Co Ltd	17AM-D115B+PTC	250V~, T110, T115, T120	EN 60730-1 EN 60730-2-22	VDE*/40016509
Alternative	Jiangsu Changsheng Electric Appliance Co Ltd	17AM-D115R+PTC	250V~, T110, T115, T120	EN 60730-1 EN 60730-2-22	VDE*/40016509
Motor cover	KINGFA SCI & TECH CO LTD	PP	PP, min. 1,0 mm thick	EN 60335-1 EN 60335-2-2 EN 60335-2-10	Tested with appliance

IEC 60335-2-2 & IEC 60335-2-10			
Clause	Requirement + Test	Result - Remark	Verdict

Enclosure (main body)	Ningbo Hesheng New Material Co., LTD	ABS	ABS, min.1,0mm thick	EN 60335-1 EN 60335-2-2 EN 60335-2-10	Tested with appliance
Supplementary information: 1)Provided evidence ensures the agreed level of compliance. See OD-CB2039.					