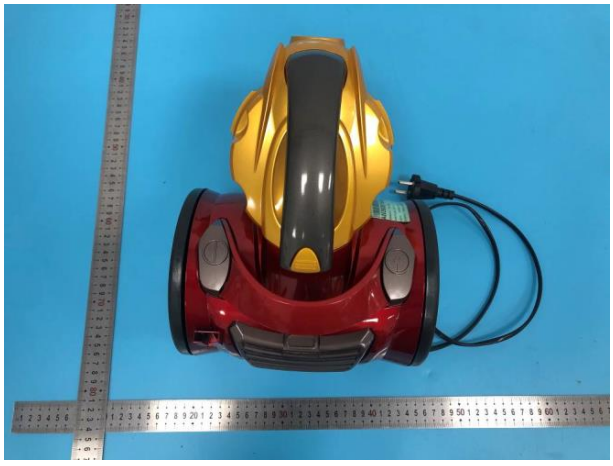
Prüfbericht-Nr.: *Test Report No.*:	**14714945 019**	**Auftrags-Nr.:** *Order No.*:	180192793	Seite 1 von 36 *Page 1 of 36*
Kunden-Referenz-Nr.: *Client Reference No.*:	N/A	**Auftragsdatum:** *Order date*:	10.10.2020	
Auftraggeber: *Client*:				
Prüfgegenstand: *Test item*:	Vacuum Cleaner			
Bezeichnung / Typ-Nr.: *Identification / Type No.*:	Refer to page 3			
Auftrags-Inhalt: *Order content*:	Type test			
Prüfgrundlage: *Test specification*:	EN 60335-1:2012+A11+A13+A1+A14+A2 EN 60335-2-2:2010+A11+A1 EN 62233:2008 AfPS GS 2019:01 PAK			

Wareneingangsdatum: *Date of receipt*:	09.10.2020
Prüfmuster-Nr.: *Test sample No.*:	A002925118
Prüfzeitraum: *Testing period*:	10.10.2020 – 10.11.2020
Ort der Prüfung: *Place of testing*:	TÜV Rheinland /CCIC (Ningbo) Co., Ltd.
Prüflaboratorium: *Testing laboratory*:	TÜV Rheinland /CCIC (Ningbo) Co., Ltd.
Prüfergebnis*: *Test result**:	Pass



geprüft von / *tested by*:

13.11.2020	Lynn Park/ PE	Lynn Park
Datum *Date*	**Name / Stellung** *Name / Position*	**Unterschrift** *Signature*

kontrolliert von / *reviewed by*:

13.11.2020	Liwei Lang / Reviewer	Liwei Lang
Datum *Date*	**Name / Stellung** *Name / Position*	**Unterschrift** *Signature*

Sonstiges / *Other*: Add alternative components, add new models and update standards.
Annex 1: PAHs risk analysis filled by manufacturer (1 page)
Annex 2: PAHs risk analysis filled by GS test center (1 page)

Zustand des Prüfgegenstandes bei Anlieferung: Prüfmuster vollständig und unbeschädigt
Condition of the test item at delivery: *Test item complete and undamaged*

* Legende:	1 = sehr gut	2 = gut	3 = befriedigend	4 = ausreichend	5 = mangelhaft
	P(ass) = entspricht o.g. Prüfgrundlage(n)		F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	N/A = nicht anwendbar	N/T = nicht getestet
Legend:	*1 = very good*	*2 = good*	*3 = satisfactory*	*4 = sufficient*	*5 = poor*
	P(ass) = passed a.m test specification(s)		*F(ail) = failed a.m test specification(s)*	*N/A = not applicable*	*N/T = not tested*

TEST REPORT
IEC 60335-2-2
Household and similar electrical appliances – Safety – Part 2-2: Particular requirements for vacuum cleaners and water-suction cleaning appliances

Report Number. ..... :	See cover page
Date of issue ..... :	See cover page
Total number of pages.....	See cover page
Applicant's name ..... :	
Address..... :	
Test specification:	
Standard..... :	IEC 60335-2-2: 2009 (Sixth Edition) + A1 : 2012 in conjunction with IEC 60335-1:2010 (Fifth Edition) (incl. Corrigendum 1:2010)
Test procedure..... :	GS and CE-LVD approval
Non-standard test method.....:	N/A
Test Report Form No. ..... :	IEC60335_2_2F
Test Report Form(s) Originator.. :	LCIE
Master TRF..... :	Dated 2013-04

This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

Test item description ..... :	Vacuum Cleaner
Trade Mark ..... :	N/A
Manufacturer ..... :	
Model/Type reference..... :	HJX1306, HJX1306B, HJX1405, HJX1406, HJX1409, HJX1306-x, HJX1306B-x, HJX1405-x, HJX1406-x, HJX1409-x; **HJX1401, HJX1402, HJX1401-x, HJX1402-x**(x=H,I,J,K,L)
Ratings..... :	AC 220-240V, 50/60Hz, Class II 700W: HJX1306, HJX1306B, HJX1405, HJX1406, HJX1409; HJX1401, HJX1402; Models with x=H; 800W: Models with x=I or x=J; 899W: Models with x=K or x=L;

Testing procedure and testing location:			
☒	**Testing Laboratory:**	TŰV Rheinland /CCIC (Ningbo) Co., Ltd.	
Testing location/ address..... :		3F, Building C13, R&D Park, No.32, Lane 299 Guanghua Road, National Hi-Tech Zone, Ningbo 315048, P.R.China	
☐	**Associated CB Testing Laboratory:**		
Testing location/ address..... :			
	Tested by (name + signature).....:	See cover page	
	Approved by (name + signature)..:	See cover page	
☐	**Testing procedure: TMP**		
Testing location/ address..... :			
	Tested by (name + signature).....:		
	Approved by (name + signature)..:		
☐	**Testing procedure: WMT**		
Testing location/ address..... :			
	Tested by (name + signature).....:		
	Witnessed by (name + signature).:		
	Approved by (name + signature)..:		
☐	**Testing procedure: SMT**		
Testing location/ address..... :			
	Tested by (name + signature).....:		
	Approved by (name + signature)..:		
	Supervised by (name + signature):		

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

N/A

Summary of testing: Pass

Tests performed (name of test and test clause):	**Testing location:**
HJX1401, HJX1402-I was subjected to the tests of clause 10. Construction check was performed on all models.	TŰV Rheinland /CCIC (Ningbo) Co., Ltd. 3F, Building C13, R&D Park, No.32, Lane 299 Guanghua Road, National Hi-Tech Zone, Ningbo 315048, P.R.China

Summary of compliance with National Differences

List of countries addressed:

DE=Germany
EUROPEAN GROUP DIFFERENCES refer to 14714945 001-018

☒ **The product fulfils the requirements of** EN 60335-1:2012+A11+A13+A1+A14+A2, EN 60335-2-2:2010+A11+A1, EN 62233:2008, AfPS GS 2019:01 PAK

Copy of marking plate

HJX1401
AC220-240V 50/60Hz 700W

Marking plates for other models were same as above one except for model designation and rated power input.

Remark: Manufacture or/and his importer shall ensure product bears label requirements in article 6 and article 8 of the 2014/35/EU relate to name, batch number, post address prior place the product into EU market.

Test item particulars .....:

Classification of installation and use.....: Portable appliance

Supply Connection.....: Type Y attachment(power cord fitted with a plug)

.....:

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 ..... : See cover page

Date (s) of performance of tests..... : See cover page

General remarks:

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 testing laboratory.
"(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.

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)..... :

General product information:

Models covered by this report are portable dry pick-up vacuum cleaners for household indoor use only.

Type	Speed adjustor	motor	Remark
HJX1306, HJX1306B	Ordinarily adjustor	Same motor	Only cover of filter is different
HJX1306-H, HJX1306B-H	Not employed		Only cover of filter is different
HJX1405, HJX1406, HJX1409	Ordinarily adjustor		Only cover is different
HJX1405-H, HJX1406-H, HJX1409-	Not employed		Only cover is different

Amendment 1:
The original Test Report Ref. No. 14714945 001 dated 2015-04-27 was modified on 2016-03-01 to add alternative switch for all models. For detail see the bold in table 24.1. CDF was revised.
This test report is only valid together with test report 14714945 001.

Amendment 2:
The original Test Report Ref. No. 14714945 001 dated 2015-04-27 was modified on 2016-05-16 as following:

1. Add alternative motor protector for all models. For detail see the bold in table 24.1. CDF was revised.
2. Issue LVD COC according to 2014/35/EU.Construction check was done, the products were not changed.

This test report is only valid together with test report 14714945 001-002.

Amendment 3:
The original Test Report Ref. No. 14714945 001 dated 2015-04-27 was modified on 2016-06-22 to make following modifications:

1. Change the motor name from “HJN-T-70” to “HJN-T-70-A”
2. Add new motor HJN-T-70 for all models.
3. Add alternative BS plug for all models.
4. Add alternative motor leading wire for all models.
5. Add alternative internal wire for all models.
6. CDF was revised.

This test report is only valid together with test report 14714945 001-003.

Amendment 4:
The original Test Report Ref. No. 14714945 001 dated 2015-04-27 was modified on 2016-06-27 to add alternative internal wire and motor leading wire for all models.

This test report is only valid together with test report 14714945 001-004.

Amendment 5:
The original Test Report Ref. No. 14714945 001 dated 2015-04-27 was modified on 2017-06-19 to make following modifications:

1. Add alternative motor cover for all models.
2. Add alternative cord reel for all models.
3. Add alternative motors HJN-D-70-1 and HJN-D-70-2 for all models.
4. Remove the previous motor HJN-T-70-A.

- For motors HJN-D-70-1 and HJN-D-70-2, they are same except little difference of enclosure.
- The motors HJN-D-70-1 and HJN-D-70-2 have thermal motor protector(optional) which listed in table 24.1.
- For motors of each model, see following Table:

Model	Motor	Alternative motor 2	Alternative motor 3
HJX1306, HJX1306B, HJX1306-H, HJX1306B-H	HJN-T-70	**HJN-D-70-1**	**HJN-D-70-2**
HJX1405, HJX1405-H,	HJN-T-70	**HJN-D-70-1**	**HJN-D-70-2**
HJX1406, HJX1406-H,	HJN-T-70	**HJN-D-70-1**	**HJN-D-70-2**
HJX1409, HJX1409-H,	HJN-T-70	**HJN-D-70-1**	**HJN-D-70-2**

After assessment, HJX1306 and HJX1405 equipped with new motor cover, new cord reels, motor HJN-D-70 and HJN-D-70-1 withstood the tests of Cl.10, Cl.11, Cl.13, Cl.19 and Cl.30.
This test report is only valid together with test report 14714945 001-005.

Amendment 6:

The original Test Report Ref. No. 14714945 001 dated 2015-04-27 was modified on 2017-07-25 as following:

1. Add new models HJX1306-x,HJX1306B-x,HJX1405-x,HJX1406-x,HJX1409-x(x=I,J,K,L)
- For models HJX1306-x(x=I,K), they are same as previous model HJX1306, except the nameplate.
- For models HJX1306B-x(x=I,K), they are same as previous model HJX1306B, except the nameplate.
- For models HJX1405-x (x=I,K), they are same as previous model HJX1405, except the nameplate.
- For models HJX1406-x (x=I,K), they are same as previous model HJX1406, except the nameplate.
- For models HJX1409-x (x=I,K), they are same as previous model HJX1409, except the nameplate.
- For models HJX1306-x(x=J,L), they are same as previous model HJX1306-H, except the nameplate.
- For models HJX1306B-x(x=J,L), they are same as previous model HJX1306B-H, except the nameplate.
- For models HJX1405-x (x=J,L), they are same as previous model HJX1405-H, except the nameplate.
- For models HJX1406-x (x=J,L), they are same as previous model HJX1406-H, except the nameplate.
- For models HJX1409-x (x=J,L), they are same as previous model HJX1409-H, except the nameplate.

For the difference of each models, see following table:

Models	Speed adjustor circuit
HJX1306, HJX1306B, HJX1405, HJX1406, HJX1409, HJX1306-x,HJX1306B-x,HJX1405-x,HJX1406-x, HJX1409-x (x=I,K)	Ordinarily adjustor
HJX1306-x,HJX1306B-x,HJX1405-x,HJX1406-x, HJX1409-x (x=H,J,L)	Not employed

2. Add alternative plug and power cord, for detail see the bold in table 24.1.CDF was revised.

This test report is only valid together with test report 14714945 001-006.

Amendment 7:

The original Test Report Ref. No. 14714945 001 dated 2015-04-27 was modified on 2017-07-26 to issue
Co-license.

Amendment 8:

The original Test Report Ref. No. 14714945 001 dated 2015-04-27 was modified on 2017-08-18 as following:

1. Add alternative motor cover for HJX1405 serial, HJX1406 serial and HJX1409 serial.
For new motor cover, it is same as pervious motor cover except little difference of air outlet, After assessment, no additional tests needed. For detail see photo documentation.
2. Modify the motor name for HJX1306-x,HJX1306B-x,HJX1405-x,HJX1406-x,HJX1409-x (x=I,J,K,L)
CDF was revised, for detail see the bold in table 24.1.
The difference of previous models, see following table:

Model	**Motor**	**Alternative motor 2**	**Alternative motor 3**	**Speed adjustor**
HJX1306, HJX1306B, HJX1405, HJX1406, HJX1409, HJX1306-x, HJX1306B-x, HJX1405-x, HJX1406-x, HJX1409-x	HJN-T-70	HJN-D-70-1	HJN-D-70-2	Ordinarily adjustor

(x=I,K)				
HJX1306-x, HJX1306B-x, HJX1405-x, HJX1406-x, HJX1409-x (x=H,J,L)	HJN-T-70	HJN-D-70-1	HJN-D-70-2	Not employed

The difference of models after modification, see the bold in following table:

Model	Motor	Alternative motor 2	Alternative motor 3	Speed adjustor
HJX1306, HJX1306B, HJX1405, HJX1406, HJX1409	HJN-T-70	HJN-D-70-1	HJN-D-70-2	Ordinarily adjustor
HJX1306-H, HJX1306B-H, HJX1405-H, HJX1406-H, HJX1409-H	HJN-T-70	HJN-D-70-1	HJN-D-70-2	Not employed
HJX1306-I, HJX1306B-I, HJX1405-I, HJX1406-I, HJX1409-I	**HJN-T-80**	**HJN-D-80-1**	**HJN-D-80-2**	Ordinarily adjustor
HJX1306-J, HJX1306B-J, HJX1405-J, HJX1406-J, HJX1409-J	**HJN-T-80**	**HJN-D-80-1**	**HJN-D-80-2**	Not employed
HJX1306-K, HJX1306B-K, HJX1405-K, HJX1406-K, HJX1409-K	**HJN-T-89**	**HJN-D-89-1**	**HJN-D-89-2**	Ordinarily adjustor
HJX1306-L, HJX1306B-L, HJX1405-L, HJX1406-L, HJX1409-L	**HJN-T-89**	**HJN-D-89-1**	**HJN-D-89-2**	Not employed

Remark:

1. For motor HJN-D-70-1, HJN-D-70-2, they are same except little difference of enclosure.
2. For motor HJN-D-70, HJN-D-80, HJN-D-89, they are same except the nameplates.
3. For motor HJN-D-70-1, HJN-D-80-1, HJN-D-89-1, they are same except the nameplates.
4. For motor HJN-D-70-2, HJN-D-80-2, HJN-D-89-2, they are same except the nameplates.

Amendment 9:
The original Test Report Ref. No. 14714945 001 dated 2015-04-27 was modified on 2017-10-17 to add alternative accessories for all models, for detail see photo documentation, After assessment, no additional tests needed.
This test report is only valid together with test report 14714945 001-009.

Amendment 10:
The original Test Report Ref. No. 14714945 001 dated 2015-04-27 was modified on 2017-11-08 to issue
Co-license.
This test report is only valid together with test report 14714945 001-010.

Amendment 11:
The original Test Report Ref. No. 14714945 001 dated 2015-04-27 was modified on 2017-11-08 to issue
Co-license.
This test report is only valid together with test report 14714945 001-011.

Amendment 12:
The original Test Report Ref. No. 14714945 001 dated 2015-04-27 was modified on 2017-12-07 to issue
Co-license.

This test report is only valid together with test report 14714945 001-012.

Amendment 13:
The original Test Report Ref. No. 14714945 001 dated 2015-04-27 was modified on 2018-03-14 to add alternative construction of button on dust cup for models HJX1405, HJX1405-x (x=H,I,J,K,L).
For detail see photo documentation, After assessment, construction check was done.
This test report is only valid together with test report 14714945 001-013.

Amendment 14:
Issue co-license.

Amendment 15:
1.Standard update from EN 60335-1:2012+A11,EN 60335-2-2:2010+A11+A1,EN 62233:2008, AfPS GS 2014:01 to EN 60335-1:2012+A11+A13,EN 60335-2-2:2010+A11+A1,EN 62233:2008,AfPS GS 2014:01
2.Add alternative cable reel for models HJX1306, HJX1306B, HJX1306-x,HJX1306B-x,(x=H,I,J,K,L).
The cable reel is totally same as original used one only shape is a little bit different.details see photo
documentation.
3.Add alternative accessories as shown in photo documentation for all models.

Amendment 16:
Issue co-license.

Amendment 17:
1. Add alternative power plug and power cord for all models, details refer to table 24.1.

Amendment 18:
1. Update standards from EN 60335-1:2012+A11+A13, EN 60335-2-2:2010+A11+A1,EN 62233:2008, AfPS GS 2014:01 to EN 60335-1:2012+A11+A13+A1+A14+A2, EN 60335-2-2:2010+A11+A1, EN 62233:2008, AfPS GS 2019:01 PAK.
2. Add new models: HJX1401, HJX1402, HJX1401-x, HJX1402-x(x=H,I,J,K,L).

Model	Motor	Alternative motor 2	Alternative motor 3	Speed adjustor
HJX1401, HJX1402	HJN-T-70	HJN-D-70-1	HJN-D-70-2	Ordinarily adjustor
HJX1401-H, HJX1402-H	HJN-T-70	HJN-D-70-1	HJN-D-70-2	Not employed
HJX1401-I, HJX1402-I	HJN-T-80	HJN-D-80-1	HJN-D-80-2	Ordinarily adjustor
HJX1401-J, HJX1402-J	HJN-T-80	HJN-D-80-1	HJN-D-80-2	Not employed
HJX1401-K, HJX1402-K	HJN-T-89	HJN-D-89-1	HJN-D-89-2	Ordinarily adjustor
HJX1401-L, HJX1402-L	HJN-T-89	HJN-D-89-1	HJN-D-89-2	Not employed

Remark:
- For models HJX1401, HJX1402, they are same as previous model HJX1405, except the nameplate and the enclosure.
- For models HJX1401-x, HJX1402-x, they are same as previous model HJX1405-x, except the nameplate and enclosure.

3. Add alternative components (internal wire) for all models. Details refer to table 24.1.

IEC/EN 60335-2-2			
Clause	Requirement + Test	Result - Remark	Verdict
7	MARKING AND INSTRUCTIONS		P
7.1	Rated voltage or voltage range (V)..... ..... :	220-240V	P
	Symbol for nature of supply, or .... :		P
	Rated frequency (Hz)..... ..... :	50/60Hz	P
	Rated power input (W), or .... :	See page 3	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 .... :		P
	Model or type reference .... :	See page 3	P
	Symbol IEC 60417-5172, for class II appliances		P
	IP number, other than IPX0..... ..... :	IP20	N/A
	Symbol IEC 60417-5180, for class III appliances, unless		N/A
	the appliance is operated by batteries only		N/A
	Symbol IEC 60417-5036, for the enclosure of electrically-operated water valves in external hose-sets for connection of an appliance to the water mains, if the working voltage exceeds extra-low voltage		N/A
7.2	Warning for stationary appliances for multiple supply		N/A
	Warning placed in vicinity of terminal cover		N/A
7.3	Range of rated values marked with the lower and upper limits separated by a hyphen		P
	Different rated values marked with the values separated by an oblique stroke		N/A
7.4	Appliances adjustable for different rated voltages, the voltage setting is clearly discernible		N/A
	Requirement met if frequent changes are not required and the rated voltage to which the appliance is to be adjusted is determined from a wiring diagram		N/A
7.5	Appliances with more than one rated voltage or one or more rated voltage ranges, marked with rated input or rated current for each rated voltage or range, unless		N/A

IEC/EN 60335-2-2			
Clause	Requirement + Test	Result - Remark	Verdict
	the power input is related to the arithmetic mean value of the rated voltage range		P
	Relation between marking for upper and lower limits of rated power input or rated current and voltage is clear		N/A
7.6	Correct symbols used		P
	Symbol for nature of supply placed next to rated voltage		N/A
	Symbol for class II appliances placed unlikely to be confused with other marking		P
	Units of physical quantities and their symbols according to international standardized system		P
	Motorized cleaning head for water-suction cleaning (symbol IEC 60417-5935) (IEC 60335-2-2)		N/A
7.7	Connection diagram fixed to appliances to be connected to more than two supply conductors and appliances for multiple supply, unless		N/A
	correct mode of connection is obvious		N/A
7.8	Except for type Z attachment, terminals for connection to the supply mains indicated as follows:		N/A
	- marking of terminals exclusively for the neutral conductor (letter N)		N/A
	- marking of protective earthing terminals (symbol IEC 60417-5019)		N/A
	- marking not placed on removable parts		N/A
7.9	Marking or placing of switches which may cause a hazard		P
7.10	Indications of switches on stationary appliances and controls on all appliances by use of figures, letters or other visual means..... .....:		P
	This applies also to switches which are part of a control		N/A
	If figures are used, the off position indicated by the figure 0		N/A
	The figure 0 indicates only OFF position, unless no confusion with the OFF position		N/A
7.11	Indication for direction of adjustment of controls		N/A
7.12	Instructions for safe use provided		P
	Details concerning precautions during user maintenance		P

IEC/EN 60335-2-2			
Clause	Requirement + Test	Result - Remark	Verdict
	The instructions state that:		P
	- the appliance is not to be used by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction	Replaced by EN 60335-1	N/A
	- children being supervised not to play with the appliance	Replaced by EN 60335-1	N/A
	For a part of class III construction supplied from a detachable power supply unit, the instructions state that the appliance is only to be used with the unit provided		N/A
	Instructions for class III appliances state that it must only be supplied at SELV, unless		N/A
	it is a battery-operated appliance, the battery being charged outside the appliance		N/A
	Instructions for current-carrying hose operating at other than safety extra-low voltage (IEC 60335-2-2): CAUTION: This hose contains electrical connections: • do not use to suck up water (for vacuum cleaners only) • do not immerse in water for cleaning • the hose should be checked regularly and must not be used if damaged		N/A
	The instructions for vacuum cleaners incorporating rotating brushes or similar devices, and water-suction cleaning appliances, shall state that the plug must be removed from the socket-outlet before cleaning or maintaining the appliance (IEC 60335-2-2)		N/A
	If symbol IEC 60417-5935 is used, its meaning shall be explained (IEC 60335-2-2)		N/A
7.12.1	Sufficient details for installation supplied		N/A
	For an appliance intended to be permanently connected to the water mains and not connected by a hose-set, this is stated		N/A
7.12.2	Stationary appliances not fitted with means for disconnection from the supply mains having a contact separation in all poles that provide full disconnection under overvoltage category III, the instructions state that means for disconnection must be incorporated in the fixed wiring in accordance with the wiring rules		N/A

IEC/EN 60335-2-2			
Clause	Requirement + Test	Result - Remark	Verdict
7.12.3	Insulation of the fixed wiring in contact with parts exceeding 50 K during clause 11; instructions state that the fixed wiring must be protected		N/A
7.12.4	Instructions for built-in appliances:		N/A
	- dimensions of space		N/A
	- dimensions and position of supporting and fixing		N/A
	- minimum distances between parts and surrounding structure		N/A
	- minimum dimensions of ventilating openings and arrangement		N/A
	- connection to supply mains and interconnection of separate components		N/A
	- allow disconnection of the appliance after installation, by accessible plug or a switch in the fixed wiring, unless		N/A
	a switch complying with 24.3		N/A
7.12.5	Replacement cord instructions, type X attachment with a specially prepared cord		N/A
	Replacement cord instructions, type Y attachment		P
	Replacement cord instructions, type Z attachment		N/A
7.12.6	Caution in the instructions for appliances incorporating a non-self-resetting thermal cut-out that is reset by disconnection of the supply mains, if this cut-out is required to comply with the standard		N/A
7.12.7	Instructions for fixed appliances stating how the appliance is to be fixed		N/A
7.12.8	Instructions for appliances connected to the water mains:		N/A
	- max. inlet water pressure (Pa)..... .....:		N/A
	- min. inlet water pressure, if necessary (Pa) ... :		N/A
	Instructions concerning new and old hose-sets for appliances connected to the water mains by detachable hose-sets		N/A
7.13	Instructions and other texts in an official language	English and German versions	P
7.14	Marking clearly legible and durable, rubbing test as specified		P
	Height of symbol 5935 IEC 60417-1 at least 15 mm (mm) (IEC 60335-2-2)		N/A
7.15	Markings on a main part		P

IEC/EN 60335-2-2			
Clause	Requirement + Test	Result - Remark	Verdict
	Marking clearly discernible from the outside, if necessary after removal of a cover	Marking clearly discernible from the outside	P
	For portable appliances, cover can be removed or opened without a tool		N/A
	For stationary appliances, name, trademark or identification mark and model or type reference visible after installation		N/A
	For fixed appliances, name, trademark or identification mark and model or type reference visible after installation according to the instructions		N/A
	Indications for switches and controls placed on or near the components. Marking not on parts which can be positioned or repositioned in such a way that the marking is misleading		P
7.16	Marking of a possible replaceable thermal link or fuse link clearly visible with regard to replacing the link		N/A
7.101	Motorized cleaning heads shall be marked with (IEC 60335-2-2)		N/A
	- rated voltage or rated voltage range (V) ..... :		N/A
	- rated power input (W) ..... :		N/A
	- name, trade mark or identification mark of manufacturer/responsible vendor ..... :		N/A
	- model/type reference ..... :		N/A
	Motorized cleaning heads for water-suction cleaning appliances shall be marked with symbol 5935 of IEC 60417-1 .....(IEC 60335-2-2)		N/A
7.102	Appliance outlets for accessories marked with maximum load (W).....(IEC 60335-2-2):		N/A
10	POWER INPUT AND CURRENT		P
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
	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

IEC/EN 60335-2-2			
Clause	Requirement + Test	Result - Remark	Verdict
	Power input of motorized cleaning heads measured separately without booster settings (IEC 60335-2-2)		P
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)	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 current is related to the arithmetic mean value of the range		N/A
22	CONSTRUCTION		P
22.1	Appliance marked with the first numeral of the IP system, relevant requirements of IEC 60529 are fulfilled	IP20	N/A
22.2	Stationary appliance: means to ensure all-pole disconnection from the supply being provided:		N/A
	- a supply cord fitted with a plug, or		N/A
	- a switch complying with 24.3, or		N/A
	- a statement in the instruction sheet that a disconnection incorporated in the fixed wiring is to be provided, or		N/A
	- an appliance inlet		N/A
	Singe-pole switches and single-pole protective devices for the disconnection of heating elements in single-phase, permanently connected class 01 and class I appliances, connected to the phase conductor		N/A
22.3	Appliance provided with pins: no undue strain on socket-outlets		N/A
	Applied torque not exceeding 0.25 Nm		N/A
	Pull force of 50N to each pin after the appliance has being placed in the heating cabinet; when cooled to room temperature the pins are not displaced by more than 1mm		N/A
	Each pin subjected to a torque of 0.4Nm; the pins are not rotating, unless		N/A
	rotating does not impair compliance with this standard		N/A
22.4	Appliance for heating liquids and appliance causing undue vibration not provided with pins for insertion into socket-outlets		N/A

IEC/EN 60335-2-2			
Clause	Requirement + Test	Result - Remark	Verdict
22.5	No risk of electric shock when touching the pins of the plug, for appliances having a capacitor with rated capacitance exceeding 0,1μF, the appliance being disconnected from the supply at the instant of voltage peak		P
	Voltage not exceeding 34 V (V)..... :	Refer to test report No.14714945 001-018	P
22.6	Electrical insulation not affected by condensing water or leaking liquid		N/A
	Electrical insulation of Class II appliances not affected if a hose ruptures or seal leaks		N/A
	In case of doubt, test as described		N/A
22.7	Adequate safeguards against the risk of excessive pressure in appliances containing liquid or gases or having steam-producing devices		N/A
22.8	Electrical connections not subject to pulling during cleaning of compartments to which access can be gained without the aid of a tool, and that are likely to be cleaned in normal use		P
22.9	Insulation, internal wiring, windings, commutators and slip rings not exposed to oil, grease or similar substances, unless		P
	the substance has adequate insulating properties		N/A
22.10	Not possible to reset voltage-maintained non-self-resetting thermal cut-outs by the operation of an automatic switching device incorporated within the appliance, if:		N/A
	- a non-self-resetting thermal cut-out is required by the standard, and		N/A
	- a voltage maintained non-self-resetting thermal cut-out is used to meet it		N/A
	Non-self-resetting thermal motor protectors have a trip-free action, unless		N/A
	they are voltage maintained		N/A
	Reset buttons of non-self-resetting controls so located or protected that accidental resetting is unlikely		N/A
22.11	Reliable fixing of non-detachable parts that provide the necessary degree of protection against electric shock, moisture or contact with moving parts		P
	Obvious locked position of snap-in devices used for fixing such parts		N/A

IEC/EN 60335-2-2			
Clause	Requirement + Test	Result - Remark	Verdict
	No deterioration of the fixing properties of snap-in devices used in parts that are likely to be removed during installation or servicing		N/A
	Tests as described		P
22.12	Handles, knobs etc. fixed in a reliable manner		P
	Fixing in wrong position of handles, knobs etc. indicating position of switches or similar components not possible		P
	Axial force 15 N applied to parts, the shape being so that an axial pull is unlikely to be applied		N/A
	Axial force 30 N applied to parts, the shape being so that an axial pull is likely to be applied	Handle and switch	P
22.13	Unlikely that handles, when gripped as in normal use, make the operator's hand touch parts having a temperature rise exceeding the value specified for handles which are held for short periods only		P
22.14	No ragged or sharp edges creating a hazard for the user in normal use, or during user maintenance		P
	No exposed pointed ends of self-tapping screws or other fasteners, likely to be touched by the user in normal use or during user maintenance		P
22.15	Storage hooks and the like for flexible cords smooth and well rounded		N/A
22.16	Automatic cord reels cause no undue abrasion or damage to the sheath of the flexible cord, no breakage of conductors strands and no undue wear of contacts		P
	Cord reel tested with 6000 operations, as specified		P
	Electric strength test of 16.3, voltage of 1000 V applied		P
22.17	Spacers not removable from the outside by hand or by means of a screwdriver or a spanner		N/A
22.18	Current-carrying parts and other metal parts resistant to corrosion		P
22.19	Driving belts not relied upon to provide the required level of insulation, unless		N/A
	constructed to prevent inappropriate replacement		N/A
22.20	Direct contact between live parts and thermal insulation effectively prevented, unless		N/A
	material used is non-corrosive, non-hygroscopic and non-combustible		N/A

IEC/EN 60335-2-2			
Clause	Requirement + Test	Result - Remark	Verdict
22.21	Wood, cotton, silk, ordinary paper and fibrous or hygroscopic material not used as insulation, unless	No such materials used as insulation	P
	impregnated		N/A
	This requirement does not apply to magnesium oxide and mineral ceramic fibres used for the electrical insulation of heating elements		N/A
22.22	Appliances not containing asbestos		P
22.23	Oils containing polychlorinated biphenyl (PCB) not used		P
22.24	Bare heating elements, except in class III appliances or class III constructions that do not contain live parts, adequately supported		N/A
	In case of rupture, the heating conductor is unlikely to come in contact with accessible metal parts		N/A
22.25	Sagging heating conductors, except in class III appliances or class III constructions that do not contain live parts, cannot come into contact with accessible metal parts		N/A
22.26	For class III constructions the insulation between parts operating at safety extra-low voltage and other live parts complies with the requirements for double or reinforced insulation		N/A
22.27	Parts connected by protective impedance separated by double or reinforced insulation		N/A
22.28	Metal parts of Class II appliances conductively connected to gas pipes or in contact with water, separated from live parts by double or reinforced insulation		N/A
22.29	Class II appliances permanently connected to fixed wiring so constructed that the required degree of access to live parts is maintained after installation		N/A
22.30	Parts serving as supplementary or reinforced insulation fixed so that they cannot be removed without being seriously damaged, or		P
	so constructed that they cannot be replaced in an incorrect position, and so that if they are omitted, the appliance is rendered inoperable or manifestly incomplete		P
22.31	Neither clearances nor creepage distances over supplementary and reinforced insulation reduced below values specified in clause 29 as a result of wear		P

IEC/EN 60335-2-2			
Clause	Requirement + Test	Result - Remark	Verdict
	Neither clearances nor creepage distances between live parts and accessible parts reduced below values for supplementary insulation if wires, screws etc. become loose		P
22.32	Supplementary and reinforced insulation constructed or protected against pollution so that clearances or creepage distances are not reduced below the values in clause 29		P
	Supplementary insulation of natural or synthetic rubber resistant to ageing, or arranged and dimensioned so that creepage distances are not reduced below values specified in 29.2		N/A
	Ceramic material not tightly sintered, similar materials or beads alone not used as supplementary or reinforced insulation		N/A
	Insulating material in which heating conductors are embedded is considered to be basic insulation, not reinforced insulation		N/A
	Oxygen bomb test at 70 °C for 96 h and 16 h at room temperature		N/A
	Vacuum cleaners constructed so that internal parts of motors and electrical connections protected against deposition of dust due to passage of air (IEC 60335-2-2)		P
22.33	Conductive liquids that are or may become accessible in normal use and conductive liquids that are in contact with unearthed accessible metal parts are not in direct contact with live parts		N/A
	Electrodes not used for heating liquids		N/A
	For class II constructions, conductive liquids that are or may become accessible in normal use and conductive liquids that are in contact with unearthed accessible metal parts, not in direct contact with basic or reinforced insulation, unless		N/A
	the reinforced insulation consists of at least 3 layers		N/A
	For class II constructions, conductive liquids which are in contact with live parts, not in direct contact with reinforced insulation, unless		N/A
	the reinforced insulation consists of at least 3 layers		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	An air layer not used as basic or supplementary insulation in a double insulation system if likely to be bridged by leaking liquid		N/A
22.34	Shafts of operating knobs, handles, levers etc. not live, unless		P
	the shaft is not accessible when the part is removed		N/A
22.35	For other than class III constructions, handles, levers and knobs, held or actuated in normal use, not becoming live in the event of a failure of basic insulation		P
	Such parts being of metal, and their shafts or fixings are likely to become live in the event of a failure of basic insulation, are either adequately covered by insulation material or their accessible parts are separated from their shafts or fixings by supplementary insulation		N/A
	This requirement does not apply to handles, levers and knobs on stationary appliances, other than those of electrical components, provided they are reliably connected to an earthing terminal or earthing contact, or separated from live parts by earthed metal		N/A
	Insulating material covering metal handles, levers and knobs withstand the electric strength test of 16.3 for supplementary insulation		N/A
22.36	For appliances other than class III, handles continuously held in the hand in normal use so constructed that when gripped as in normal use, the operators hand is not likely to touch metal parts, unless		P
	they are separated from live parts by double or reinforced insulation		N/A
22.37	Capacitors in Class II appliances not connected to accessible metal parts and their casings, if of metal, separated from accessible metal parts by supplementary insulation, unless		P
	the capacitors comply with 22.42		N/A
22.38	Capacitors not connected between the contacts of a thermal cut-out		N/A
22.39	Lamp holders used only for the connection of lamps		N/A

IEC/EN 60335-2-2			
Clause	Requirement + Test	Result - Remark	Verdict
22.40	Motor-operated appliances and combined appliances intended to be moved while in operation, or having accessible moving parts, fitted with a switch to control the motor. The actuating member of the switch being easily visible and accessible		P
	If the appliance cannot operate continuously, automatically or remotely without giving rise to a hazard, appliances for remote operation being fitted with a switch for stopping the operation. The actuating member of the switch being easily visible and accessible		N/A
22.41	No components, other than lamps, containing mercury		P
22.42	Protective impedance consisting of at least two separate components		N/A
	Values specified in 8.1.4 not exceeded if any one of the components are short-circuited or open-circuited		N/A
	Resistors checked by the test of 14.1 a) in IEC 60065		N/A
	Capacitors checked by the tests for class Y capacitors in IEC 60384-14		N/A
22.43	Appliances adjustable for different voltages, accidental changing of the setting of the voltage unlikely to occur		N/A
22.44	Appliances not having an enclosure that is shaped or decorated like a toy		P
22.45	When air is used as reinforced insulation, clearances not reduced below the values specified in 29.1.3 due to deformation as a result of an external force applied to the enclosure		P
24	COMPONENTS		P
24.1	Components comply with safety requirements in relevant IEC standards		P
	List of components ..... :	(see appended table)	P
29	CLEARANCES, CREEPAGE DISTANCES AND SOLID INSULATION		P
	Clearances, creepage distances and solid insulation withstand electrical stress		P
	For coatings used on printed circuits boards to protect the microenvironment (Type 1) or to provide basic insulation (Type 2), Annex J applies ..... :		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	The microenvironment is pollution degree 1 under type 1 protection		N/A
	For type 2 protection, the spacing between the conductors before the protection is applied is not less than the values specified in Table 1 of IEC 60664-3		N/A
	These values apply to functional, basic, supplementary and reinforced insulation ..... :		N/A
29.1	Clearances not less than the values specified in table 16, taking into account the rated impulse voltage for the overvoltage categories of table 15, unless..... :	(see appended table)	P
	for basic insulation and functional insulation they comply with the impulse voltage test of clause 14		N/A
	However, if the distances are affected by wear, distortion, movement of the parts or during assembly, the clearances for rated impulse voltages of 1500V and above are increased by 0,5 mm and the impulse voltage test is not applicable		P
	Impulse voltage test is not applicable:		P
	- when the microenvironment is pollution degree 3, or		P
	- for basic insulation of class 0 and class 01 appliances		N/A
	Appliances are in overvoltage category II		P
	A force of 2 N is applied to bare conductors, other than heating elements		N/A
	A force of 30 N is applied to accessible surfaces		P
29.1.1	Clearances of basic insulation withstand the overvoltages, taking into account the rated impulse voltage		P
	The values of table 16 or the impulse voltage test of clause 14 are applicable..... :	(see appended table)	P
	Clearance at the terminals of tubular sheathed heating elements may be reduced to 1,0 mm if the microenvironment is pollution degree 1		N/A
	Lacquered conductors of windings considered to be bare conductors		P
29.1.2	Clearances of supplementary insulation not less than those specified for basic insulation in table 16..... :	(see appended table)	P

IEC/EN 60335-2-2			
Clause	Requirement + Test	Result - Remark	Verdict
29.1.3	Clearances of reinforced insulation not less than those specified for basic insulation in table 16, using the next higher step for rated impulse voltage ..... :		P
	For double insulation, with no intermediate conductive part between basic and supplementary insulation, clearances are measured between live parts and the accessible surface, and the insulation system is treated as reinforced insulation		P
29.1.4	Clearances for functional insulation are the largest values determined from:		P
	- table 16 based on the rated impulse voltage... :	(see appended table)	P
	- table F.7a in IEC 60664-1, frequency not exceeding 30 kHz		P
	- clause 4 of IEC 60664-4, frequency exceeding 30 kHz		N/A
	If values of table 16 are largest, the impulse voltage test of clause 14 may be applied instead, unless		N/A
	the microenvironment is pollution degree 3, or		P
	the distances can be affected by wear, distortion, movement of the parts or during assembly		P
	However, clearances are not specified if the appliance complies with clause 19 with the functional insulation short-circuited		N/A
	Lacquered conductors of windings considered to be bare conductors		P
	However, clearances at crossover points are not measured		P
	Clearance between surfaces of PTC heating elements may be reduced to 1mm		N/A
29.2	Creepage distances not less than those appropriate for the working voltage, taking into account the material group and the pollution degree..... :	(see appended table)	P
	Pollution degree 2 applies, unless		N/A
	- precautions taken to protect the insulation; pollution degree 1		N/A
	- insulation subjected to conductive pollution; pollution degree 3		P
	A force of 2 N is applied to bare conductors, other than heating elements		N/A
	A force of 30 N is applied to accessible surfaces		P

IEC/EN 60335-2-2			
Clause	Requirement + Test	Result - Remark	Verdict
	In a double insulation system, the working voltage for both the basic and supplementary insulation is taken as the working voltage across the complete double insulation system		P
29.2.1	Creepage distances of basic insulation not less than specified in table 17 ..... :	(see appended table)	P
	However, if the working voltage is periodic and has a frequency exceeding 30 kHz, the creepage distances are also determined from table 2 of IEC 60664-4, these values being used if exceeding the values in table 17..... :		N/A
	Except for pollution degree 1, corresponding creepage distance not less than the minimum specified for the clearance in table 16, if the clearance has been checked according to the test of clause 14 ..... :		N/A
29.2.2	Creepage distances of supplementary insulation at least those specified for basic insulation in table 17, or..... :	(see appended table)	P
	Table 2 of IEC 60664-4, as applicable..... :		N/A
29.2.3	Creepage distances of reinforced insulation at least double those specified for basic insulation in table 17, or..... :		P
	Table 2 of IEC 60664-4, as applicable..... :		N/A
29.2.4	Creepage distances of functional insulation not less than specified in table 18 ..... :		P
	However, if the working voltage is periodic and has a frequency exceeding 30 kHz, the creepage distances are also determined from table 2 of IEC 60664-4, these values being used if exceeding the values in table 18..... :		N/A
	Creepage distances may be reduced if the appliance complies with clause 19 with the functional insulation short-circuited		N/A
29.3	Supplementary and reinforced insulation have adequate thickness, or a sufficient number of layers, to withstand the electrical stresses		P
	Compliance checked:		P
	- by measurement, in accordance with 29.3.1, or		P
	- by an electric strength test in accordance with 29.3.2, or		N/A
	- by an assessment of the thermal quality of the material combined with an electric strength test, in accordance with 29.3.3, and		N/A

IEC/EN 60335-2-2			
Clause	Requirement + Test	Result - Remark	Verdict
	for accessible parts of reinforced insulation consisting of a single layer, by measurement in accordance with 29.3.4, or		N/A
	- as specified in subclause 6.3 of IEC 60664-4 for insulation that is subjected to any periodic voltage having a frequency exceeding 30 kHz		N/A
29.3.1	Supplementary insulation have a thickness of at least 1 mm		P
	Reinforced insulation have a thickness of at least 2 mm		P

IEC/EN 60335-2-2			
Clause	Requirement + Test	Result - Remark	Verdict

10.1	TABLE: Power input deviation				P
Input deviation of/at:	P rated (W)	P measured (W)	dP (W, %)	Required dP (W, %)	Remark
AC230V 50Hz	700	651.3	-6.96%	+15%	HJX1401
AC230V 60Hz	700	645.9	-7.73%	+15%	HJX1401
AC230V 50Hz	800	630.2	-9.91%	+15%	HJX1402-I
AC230V 60Hz	800	622.4	-11.09%	+15%	HJX1402-I

24.1	TABLE: Critical components information For all models				P
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity1)
Power cord	**Zhejiang Jinting Nuclear Cable Co.,Ltd.**	H05VV-F, H05VVH2-F	2X0,75mm2	EN 50525-2-11	VDE 40013419
Internal wire except motor lead wire	**NINGBO YiLiTong Wire&Cable CO LTD**	**1015**	**600V; 18AWG; T105**	**EN 60335-1 EN 60335-2-2**	**UL E354214***
Supplementary information: 1) Provided evidence ensures the agreed level of compliance. See OD-CB2039.					

24.1	TABLE: Critical components information For HJX1401, HJX1402; HJX1401-x, HJX1402-x(x=H,I,J,K,L)				P
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity1)
Power plug	Yuyao Yuxiang Electric Appliances Co., Ltd.	YXD-02	AC 250V;16A	DIN VDE 0620-1	VDE 40009922
	Ningbo Xuanshi Electronics Co., Ltd.	JL-2	AC 250V;16A	DIN VDE 0620-1	VDE 40006494
	Ningbo Jiulian Wire Co., Ltd.	JL201	AC 250V;16A	DIN VDE 0620-1	VDE 126375
	Ningbo Whale Power Cord Co., Ltd.	JY-002A	AC 250V;16A	DIN VDE 0620-1	VDE 40015472
	Shangyu Jintao Electron Co., Ltd.	JT002 /B	AC 250V;16A	DIN VDE 0620-1	VDE 40021698
	Yuyao Fanghua Electronics Co., Ltd.	FH-02	AC 250V;16A	DIN VDE 0620-1	VDE 40038246

IEC/EN 60335-2-2			
Clause	Requirement + Test	Result - Remark	Verdict

	Yuyao Zhongjian Electric Appliance Co., Ltd.	ZJ-02	AC 250V;16A	DIN VDE 0620-1	VDE 40046207
Power plug for UK market	Ningbo Xuanshi Electric Co.,Ltd	JL-49	AC 250V;13A	BS 1363	KM 548251
	Yuyao Yunbiao Electronics Co.,Ltd.	YB006	AC 250V;13A	BS 1363	BSI KM 73093
	Ningbo Qiaopu Electric Co., Ltd	D09	AC 250V;13A	BS 1363	ASTA 930
	Dongguan Marsh Electric Appliance Co.,Ltd	1906; 1908	AC 250V;13A	BS 1363	ASTA 1237
	Yuyao City Dongdong Electric Appliance Factory	Y006; Y006-A	AC 250V;13A	BS 1363	ASTA 1199
	Ningbo Xuanhua Electric Appliance Co.,Ltd	XH031B; XH031C	AC 250V;13A	BS 1363	ASTA 1118
Power plug for Italy	NINGBO QIAOPU ELECTRIC CO., LTD.	D07	AC 250V;10A	CEI 23-50-1	IMQ CA02.01118
Power cord	Ningbo Whale Power Cord Co., Ltd.	H05VV-F, H05VVH2-F	2X0,75mm2	EN 50525-2-11	VDE 40013812
	Ningbo Xuanshi Electronics Co., Ltd.	H05VV-F, H05VVH2-F	2X0,75mm2	EN 50525-2-11	VDE 40011761
	Ningbo Jiulian Wire Co., Ltd.	H05VV-F, H05VVH2-F	2X0,75mm2	EN 50525-2-11	VDE 106428
	Yuyao Yuxiang Electric Appliances Co., Ltd.	H05VV-F, H05VVH2-F	2X0,75mm2	EN 50525-2-11	VDE 40005361
	Ningbo Liansheng Wire & Cable Co., Ltd.	H05VV-F, H05VVH2-F	2X0,75mm2	EN 50525-2-11	VDE 40022054
	Zhejiang Jinting Nuclear Cable Co.,Ltd.	H05VV-F, H05VVH2-F	2X0,75mm2	EN 50525-2-11	VDE 40013419
	Yuyao Fanghua Electronics Co., Ltd.	H05VV-F, H05VVH2-F	2X0,75mm2	EN 50525-2-11	VDE 40003585
	Yuyao Zhongjian Electric Appliance Co., Ltd.	H05VV-F H05VVH2-F	2X0,75mm2	EN 50525-2-11	VDE 40033849

IEC/EN 60335-2-2			
Clause	Requirement + Test	Result - Remark	Verdict

Switch	NOVA Electronics Co. Ltd.	KAN-J4	AC 250V;8(8)A; 10E3;T85	EN 61058-1	VDE 40002455
	Yuyao City Simen Tongde Tele. Equipment Factory	KAN-J4	AC 250V;8(8)A; 1E4;T85	EN 61058-1	TUV PS B 11 06 54115 019
	ZHEJIANG HONGHUA ELECTRONICS CO., LTD	KAG-01	AC250V;7(7)A; 1E4;T85	EN 61058-1	TUVRh 50197877
	ZHEJIANG HONGHUA ELECTRONICS CO., LTD	KAG-01x	AC250V;12(10)A; 1E4;T105	EN 61058-1	TUVRh 50197522
	Shangyu Hongfa Electron Co., Ltd.	KAG-01	AC 250V;8(8)A; 1E4;T85	EN 61058-1	TUVRh 50081437
X2 capacitor	1.Aid Electronic Corporation	MEX	AC 275 V;0,22uF, 40/085/21C	EN 60384-14	VDE 40028973
	2.Rugao Shuangcheng Electronic Co., Ltd.	MKP	AC 275 V;0,22uF, 40/100/21	EN 60384-14	VDE 40025673
Motor lead wire	1.YUYAO DONGHAI SPECIAL WIRE FACTORY	1015	600V; 18AWG; T105	EN 60335-1 EN 60335-2-2	UL E212811*
	2.SUZHOU LONG CHANG PLASTIC & CABLE CO LTD	1015	600V; 18AWG; T105	EN 60335-1 EN 60335-2-2	UL E233980*
	3.NINGBO HUIERNA CABLE ELECTRICAL CO LTD	1015	600V; 18AWG; T105	EN 60335-1 EN 60335-2-2	UL E354214*
	4.Yuyao Lingtong Electric Appliance Industrial Co Ltd	1015	600V; 18AWG; T105	EN 60335-1 EN 60335-2-2	UL E481441*
	5.SHANGYU JINTAO ELECTRON CO LTD	1015	600V; 18AWG; T105	EN 60335-1 EN 60335-2-2	UL E313965*
Internal wire except motor lead wire	1.Yuyao Yitong Wire Cable Co.,Ltd.	RV-90	1x0,75mm2	EN 60335-1 EN 60335-2-2	Tested with appliance

IEC/EN 60335-2-2			
Clause	Requirement + Test	Result - Remark	Verdict

	2.Yuyao Jianmei Electric Wire & Cable Co.,Ltd.	RV-90	1x0,75mm2	EN 60335-1 EN 60335-2-2	Tested with appliance
	3.Yuyao Lingtong Wire Co.,Ltd.	RV-90	1x0,75mm2	EN 60335-1 EN 60335-2-2	Tested with appliance
	4.NingBo YunHuan Electronics Group Co.,LTD	RV-90	1x0,75mm2	EN 60335-1 EN 60335-2-2	Tested with appliance
	5.YUYAO DONGHAI SPECIAL WIRE FACTORY	1015	600V; 18AWG; T105	EN 60335-1 EN 60335-2-2	UL E212811*
	6.SUZHOU LONG CHANG PLASTIC & CABLE CO LTD	1015	600V; 18AWG; T105	EN 60335-1 EN 60335-2-2	UL E233980*
	7.NINGBO YiLiTong Wire&Cable CO LTD	1015	600V; 18AWG; T105	EN 60335-1 EN 60335-2-2	UL E354214*
	8.Yuyao Lingtong Electric Appliance Industrial Co Ltd	1015	600V; 18AWG; T105	EN 60335-1 EN 60335-2-2	UL E481441*
	9.SHANGYU JINTAO ELECTRON CO LTD	1015	600V; 18AWG; T105	EN 60335-1 EN 60335-2-2	UL E313965*
Motor for HJX1401 HJX1402 HJX1401-H HJX1402-H		HJN-T-70	AC 220-240V; 50/60Hz;Class 120; Stator: 2.090Ω(23.2℃); Rotor(diagonal): 3.898Ω(23.2℃)	EN 60335-1 EN 60335-2-2	Tested with appliance
		HJN-D-70-1	AC 220-240V; 50/60Hz;Class 120; Stator: 2.008Ω(23.1℃); Rotor(diagonal): 4.021Ω(23.1℃)	EN 60335-1 EN 60335-2-2	Tested with appliance

IEC/EN 60335-2-2			
Clause	Requirement + Test	Result - Remark	Verdict

		HJN-D-70-2	AC 220-240V; 50/60Hz;Class 120; Stator: 2.008Ω(23.1℃); Rotor(diagonal): 4.021Ω(23.1℃)	EN 60335-1 EN 60335-2-2	Tested with appliance
Motor for HJX1401-I HJX1402-I HJX1401-J HJX1402-J		HJN-T-80	AC 220-240V; 50/60Hz;Class 120; Stator: 2.090Ω(23.2℃); Rotor(diagonal): 3.898Ω(23.2℃)	EN 60335-1 EN 60335-2-2	Tested with appliance
		HJN-D-80-1	AC 220-240V; 50/60Hz;Class 120; Stator: 2.008Ω(23.1℃); Rotor(diagonal): 4.021Ω(23.1℃)	EN 60335-1 EN 60335-2-2	Tested with appliance
		HJN-D-80-2	AC 220-240V; 50/60Hz;Class 120; Stator: 2.008Ω(23.1℃); Rotor(diagonal): 4.021Ω(23.1℃)	EN 60335-1 EN 60335-2-2	Tested with appliance
Motor for HJX1401-K HJX1402-K HJX1401-L HJX1402-L		HJN-T-89	AC 220-240V; 50/60Hz;Class 120; Stator: 2.090Ω(23.2℃); Rotor(diagonal): 3.898Ω(23.2℃)	EN 60335-1 EN 60335-2-2	Tested with appliance
		HJN-D-89-1	AC 220-240V; 50/60Hz;Class 120; Stator: 2.008Ω(23.1℃); Rotor(diagonal): 4.021Ω(23.1℃)	EN 60335-1 EN 60335-2-2	Tested with appliance
		HJN-D-89-2	AC 220-240V; 50/60Hz;Class 120; Stator: 2.008Ω(23.1℃); Rotor(diagonal): 4.021Ω(23.1℃)	EN 60335-1 EN 60335-2-2	Tested with appliance

IEC/EN 60335-2-2			
Clause	Requirement + Test	Result - Remark	Verdict

Motor protector (optional)	1.Jiangsu Changsheng Electric appliance Co.,Ltd	17AM-D	AC250V; Tf95℃-Tf105℃; Tm150℃	DIN EN 60730-1 DIN EN 60730-2-2	VDE 40016509
	2.JiangSu Yi Tong Control System Co.,Ltd	17AMG 026	AC250V; Tf95℃-Tf105℃; Tm180℃	DIN EN 60730-1 DIN EN 60730-2-2	VDE 40022710
PCB for HJX1401 HJX1401-x(x=I,K) HJX1402 HJX1402-x(x=I,K)	Yuyao Dingheng Electron Co.,Ltd.	0097B2	0097B2	EN 60335-1 EN 60335-2-2	Tested with appliance
Enclosure	LG Chemical Ltd.	PP	PP	EN 60335-1 EN 60335-2-2	Tested with appliance
Hose handle	LG Chemical Ltd.	PP	PP	EN 60335-1 EN 60335-2-2	Tested with appliance
Supplementary information: 1) Provided evidence ensures the agreed level of compliance. See OD-CB2039.					

29.1	**TABLE: Clearances**					P
	Overvoltage category..... .... :			II		—
		Type of insulation:				
Rated impulse voltage (V):	Min. cl (mm)	Basic (mm)	Supplementary (mm)	Reinforced (mm)	Functional (mm)	Verdict / Remark
330	0,2* / 0,5 / 0,8**					N/A
500	0,2* / 0,5 / 0,8**					N/A
800	0,2* / 0,5 / 0,8**					N/A
1 500	0,5 / 0,8** / 1,0***					N/A
2 500	1,5 / 2,0***	Note 1	Note 2		Note 4	P
4 000	3,0 / 3,5***			Note 3		P
6 000	5,5 / 6,0***					N/A
8 000	8,0 / 8,5***					N/A
10 000	11,0 / 11,5***					N/A

IEC/EN 60335-2-2			
Clause	Requirement + Test	Result - Remark	Verdict

Supplementary information:

*) For tracks on printed circuit boards if pollution degree 1 and 2
**) For pollution degree 3
***) If the construction is affected by wear, distortion, movement of the parts or during assembly

Note 1:
stator winding – silicon steel sheet: Cl. =2,2mm > 2,0mm

Note 2:
internal wire – accessible plastic enclosure: Cl. =4,2mm > 2,0mm

Note 3:
live parts – accessible plastic enclosure: Cl. = 5,0mm > 3,5mm

Note 4:
L-N of PCB: Cl. =2,1mm > 2,0mm

29.2	**TABLE: Creepage distances, basic, supplementary and reinforced insulation**	P

Working voltage (V)	Creepage distance (mm) Pollution degree										
	1	2			3			Type of insulation			
		Material group			Material group						
		I	II	IIIa/IIIb	I	II	IIIa/IIIb*)	B**)	S**)	R**)	Verdict
≤50	0,18	0,6	0,85	1,2	1,5	1,7	1,9		—	—	N/A
≤50	0,18	0,6	0,85	1,2	1,5	1,7	1,9	—		—	N/A
≤50	0,36	1,2	1,7	2,4	3,0	3,4	3,8	—	—		N/A
125	0,28	0,75	1,05	1,5	1,9	2,1	2,4		—	—	N/A
125	0,28	0,75	1,05	1,5	1,9	2,1	2,4	—		—	N/A
125	0,56	1,5	2,1	3,0	3,8	4,2	4,8	—	—		N/A
250	0,56	1,25	1,8	2,5	3,2	3,6	4,0	Note 1	—	—	P
250	0,56	1,25	1,8	2,5	3,2	3,6	4,0	—	Note 2	—	P
250	1,12	2,5	3,6	5,0	6,4	7,2	8,0	—	—	Note 3	P
400	1,0	2,0	2,8	4,0	5,0	5,6	6,3		—	—	N/A
400	1,0	2,0	2,8	4,0	5,0	5,6	6,3	—		—	N/A
400	2,0	4,0	5,6	8,0	10,0	11,2	12,6	—	—		N/A
500	1,3	2,5	3,6	5,0	6,3	7,1	8,0		—	—	N/A
500	1,3	2,5	3,6	5,0	6,3	7,1	8,0	—		—	N/A
500	2,6	5,0	7,2	10,0	12,6	14,2	16,0	—	—		N/A

IEC/EN 60335-2-2			
Clause	Requirement + Test	Result - Remark	Verdict

>630 and ≤800	1,8	3,2	4,5	6,3	8,0	9,0	10,0		—	—	N/A
>630 and ≤800	1,8	3,2	4,5	6,3	8,0	9,0	10,0	—		—	N/A
>630 and ≤800	3,6	6,4	9,0	12,6	16,0	18,0	20,0	—	—		N/A
>800 and ≤1000	2,4	4,0	5,6	8,0	10,0	11,0	12,5		—	—	N/A
>800 and ≤1000	2,4	4,0	5,6	8,0	10,0	11,0	12,5	—		—	N/A
>800 and ≤1000	4,8	8,0	11,2	16,0	20,0	22,0	25,0	—	—		N/A
>1000 and ≤1250	3,2	5,0	7,1	10,0	12,5	14,0	16,0		—	—	N/A
>1000 and ≤1250	3,2	5,0	7,1	10,0	12,5	14,0	16,0	—		—	N/A
>1000 and ≤1250	6,4	10,0	14,2	20,0	25,0	28,0	32,0	—	—		N/A
>1250 and ≤1600	4,2	6,3	9,0	12,5	16,0	18,0	20,0		—	—	N/A
>1250 and ≤1600	4,2	6,3	9,0	12,5	16,0	18,0	20,0	—		—	N/A
>1250 and ≤1600	8,4	12,6	18,0	25,0	32,0	36,0	40,0	—	—		N/A
>1600 and ≤2000	5,6	8,0	11,0	16,0	20,0	22,0	25,0		—	—	N/A
>1600 and ≤2000	5,6	8,0	11,0	16,0	20,0	22,0	25,0	—		—	N/A
>1600 and ≤2000	11,2	16,0	22,0	32,0	40,0	44,0	50,0	—	—		N/A
>2000 and ≤2500	7,5	10,0	14,0	20,0	25,0	28,0	32,0		—	—	N/A
>2000 and ≤2500	7,5	10,0	14,0	20,0	25,0	28,0	32,0	—		—	N/A
>2000 and ≤2500	15,0	20,0	28,0	40,0	50,0	56,0	64,0	—	—		N/A
>2500 and ≤3200	10,0	12,5	18,0	25,0	32,0	36,0	40,0		—	—	N/A
>2500 and ≤3200	10,0	12,5	18,0	25,0	32,0	36,0	40,0	—		—	N/A
>2500 and ≤3200	20,0	25,0	36,0	50,0	64,0	72,0	80,0	—	—		N/A
>3200 and ≤4000	12,5	16,0	22,0	32,0	40,0	45,0	50,0		—	—	N/A
>3200 and ≤4000	12,5	16,0	22,0	32,0	40,0	45,0	50,0	—		—	N/A
>3200 and ≤4000	25,0	32,0	44,0	64,0	80,0	90,0	100,0	—	—		N/A
>4000 and ≤5000	16,0	20,0	28,0	40,0	50,0	56,0	63,0		—	—	N/A
>4000 and ≤5000	16,0	20,0	28,0	40,0	50,0	56,0	63,0	—		—	N/A
>4000 and ≤5000	32,0	40,0	56,0	80,0	100,0	112,0	126,0	—	—		N/A
>5000 and ≤6300	20,0	25,0	36,0	50,0	63,0	71,0	80,0		—	—	N/A
>5000 and ≤6300	20,0	25,0	36,0	50,0	63,0	71,0	80,0	—		—	N/A
>5000 and ≤6300	40,0	50,0	72,0	100,0	126,0	142,0	160,0	—	—		N/A
>6300 and ≤8000	25,0	32,0	45,0	63,0	80,0	90,0	100,0		—	—	N/A
>6300 and ≤8000	25,0	32,0	45,0	63,0	80,0	90,0	100,0	—		—	N/A
>6300 and ≤8000	50,0	64,0	90,0	126,0	160,0	180,0	200,0	—	—		N/A
>8000 and ≤10000	32,0	40,0	56,0	80,0	100,0	110,0	125,0		—	—	N/A
>8000 and ≤10000	32,0	40,0	56,0	80,0	100,0	110,0	125,0	—		—	N/A

IEC/EN 60335-2-2			
Clause	Requirement + Test	Result - Remark	Verdict

>8000 and ≤10000	64,0	80,0	112,0	160,0	200,0	220,0	250,0	—	—		N/A
>10000 and ≤12500	40,0	50,0	71,0	100,0	125,0	140,0	160,0		—	—	N/A
>10000 and ≤12500	40,0	50,0	71,0	100,0	125,0	140,0	160,0	—		—	N/A
>10000 and ≤12500	80,0	100,0	142,0	200,0	250,0	280,0	320,0	—	—		N/A

Supplementary information:

*) Material group IIIb is allowed if the working voltage does not exceed 50 V
**) B = Basic insulation, S = Supplementary insulation, R = Reinforced insulation

Note1:
stator winding – silicon steel sheet: Cr. = 2,2mm > 2,0mm

Note2:
Internal wire – accessible plastic enclosure: Cr. =4,2mm > 4,0mm

Note3:
live parts – accessible plastic enclosure: Cr. = 9,0mm > 8,0mm

Remark: Lacquered conductors of windings are considered to be bare conductors, but creepage distances need not be greater than the associated clearance specified in table 16 taking into account 29.1.1.

29.2	**TABLE: Creepage distances, functional insulation**							P
Working voltage (V)	Creepage distance (mm) Pollution degree							
	1	2			3			
		Material group			Material group			
		I	II	IIIa/IIIb	I	II	IIIa/IIIb*)	Verdict / Remark
≤10	0,08	0,4	0,4	0,4	1,0	1,0	1,0	N/A
50	0,16	0,56	0,8	1,0	1,4	1,6	1,8	N/A
125	0,25	0,71	1,0	1,4	1,8	2,0	2,2	N/A
250	0,42	1,0	1,4	2,0	2,5	2,8	3,2	P
400	0,75	1,6	2,2	3,2	4,0	4,5	5,0	N/A
500	1,0	2,0	2,8	4,0	5,0	5,6	6,3	N/A
>630 and ≤800	1,8	3,2	4,5	6,3	8,0	9,0	10,0	N/A
>800 and ≤1000	2,4	4,0	5,6	8,0	10,0	11,0	12,5	N/A
>1000 and ≤1250	3,2	5,0	7,1	10,0	12,5	14,0	16,0	N/A
>1250 and ≤1600	4,2	6,3	9,0	12,5	16,0	18,0	20,0	N/A
>1600 and ≤2000	5,6	8,0	11,0	16,0	20,0	22,0	25,0	N/A
>2000 and ≤2500	7,5	10,0	14,0	20,0	25,0	28,0	32,0	N/A
>2500 and ≤3200	10,0	12,5	18,0	25,0	32,0	36,0	40,0	N/A
>3200 and ≤4000	12,5	16,0	22,0	32,0	40,0	45,0	50,0	N/A

IEC/EN 60335-2-2			
Clause	Requirement + Test	Result - Remark	Verdict

>4000 and ≤5000	16,0	20,0	28,0	40,0	50,0	56,0	63,0	N/A
>5000 and ≤6300	20,0	25,0	36,0	50,0	63,0	71,0	80,0	N/A
>6300 and ≤8000	25,0	32,0	45,0	63,0	80,0	90,0	100,0	N/A
>8000 and ≤10000	32,0	40,0	56,0	80,0	100,0	110,0	125,0	N/A
>10000 and ≤12500	40,0	50,0	71,0	100,0	125,0	140,0	160,0	N/A

Supplementary information:

*) Material group IIIb is allowed if the working voltage does not exceed 50 V

L-N of PCB: Cr. ≥ 3,3mm > 3,2mm

<End of Test Report>

Annex 1 of 14714945 019

TÜVRheinland®
Precisely Right.

PAH Material List (to be filled by the manufactory)
Material list for PAH risk assessment, only materials accessible without tools shall be listed

Material #	Location/Function of the material	Name/Description of the material	Evidence attached. Institute, report no., date	Category	Smell	Rigidity	Colour
1	Power cord	PVC/Black,	---	☐ 1 ☐ 2 ☒ 3	☐ Yes ☒ No	☐ Soft ☒ Flexible ☐ Rigid	☒ Black or dark-colored ☒ White or light-colored
2	Power plug	PVC/Black	---	☐ 1 ☐ 2 ☒ 3	☐ Yes ☒ No	☐ Soft ☐ Flexible ☒ Rigid	☒ Black or dark-colored ☒ White or light-colored
3	Button	Plastic/black	---	☐ 1 ☐ 2 ☒ 3	☐ Yes ☒ No	☐ Soft ☐ Flexible ☒ Rigid	☒ Black or dark-colored ☐ White or light-colored
4	Handle	Plastic/black	TŰV Rheinland /CCIC (Ningbo) Co., Ltd. 180183327a 001	☐ 1 ☒ 2 ☐ 3	☐ Yes ☒ No	☐ Soft ☐ Flexible ☒ Rigid	☒ Black or dark-colored ☐ White or light-colored
5	Hose	Plastic/black	TŰV Rheinland /CCIC (Ningbo) Co., Ltd. 180183327a 001	☐ 1 ☒ 2 ☐ 3	☐ Yes ☒ No	☐ Soft ☒ Flexible ☐ Rigid	☒ Black or dark-colored ☐ White or light-colored

I herewith declare that the above listed materials are used in our product submitted to GS-certification and conform with the attached PAH test reports.

Product Identification: Vacuum cleaner

Model: HJX1401, HJX1402; HJX1401-x, HJX1402-x(x=H,I,J,K,L)

Place _____Date_____,

_____

(Applicant‘s seal and legally binding signature)

宁波海尔电器有限公司
NINGBO HAIJI ELECTRIC APPLIANCE CO.,LTD.

Annex 2: Information from GS test center
Material list for PAH risk assessment; only materials accessible without tools

Product designation: vacuum cleaner

Certificate No.: S 50383044 0003-0004
Test report No.: 14714945 019

Material / Compo-nent #	Location / Function of the material	Name / Description of the material	PAH relevant 1)	Evidence attached. Institute, report no., date	Category	Smell	Rigidity	Colour	Correction of dada by test center? 1)	Chem. test needed?	Test result (within the given limits)	Attachement
1	Power cord	PVC/Black,	☒ Yes ☐ No	---	☐ 1 ☐ 2 ☒ 3	☐ Yes ☒ No	☐ Soft ☒ Flexible ☐ Rigid	☒ Black or dark-colored ☒ White or light-colored	☒ No ☐ Yes	☒ No ☐ Yes	☐ passed ☐ failed	---
2	Power plug	PVC/Black	☒ Yes ☐ No	---	☐ 1 ☐ 2 ☒ 3	☐ Yes ☒ No	☐ Soft ☐ Flexible ☒ Rigid	☒ Black or dark-colored ☒ White or light-colored	☒ No ☐ Yes	☒ No ☐ Yes	☐ passed ☐ failed	---
3	Button	Plastic/black	☒ Yes ☐ No	--	☐ 1 ☐ 2 ☒ 3	☐ Yes ☒ No	☐ Soft ☐ Flexible ☒ Rigid	☒ Black or dark-colored ☐ White or light-colored	☒ No ☐ Yes	☒ No ☐ Yes	☐ passed ☐ failed	---
4	Handle	Plastic/black	☒ Yes ☐ No	TÜV Rheinland /CCIC (Ningbo) Co., Ltd. 180183327a 001	☐ 1 ☒ 2 ☐ 3	☐ Yes ☒ No	☐ Soft ☐ Flexible ☒ Rigid	☒ Black or dark-colored ☐ White or light-colored	☒ No ☐ Yes	☐ No ☒ Yes	☒ passed ☐ failed	**YES**
5	Hose	Plastic/black	☒ Yes ☐ No	TÜV Rheinland /CCIC (Ningbo) Co., Ltd. 180183327a 001	☐ 1 ☒ 2 ☐ 3	☐ Yes ☒ No	☐ Soft ☒ Flexible ☐ Rigid	☒ Black or dark-colored ☐ White or light-colored	☒ No ☐ Yes	☐ No ☒ Yes	☒ passed ☐ failed	**YES**

1) Enter all PAK considered materials.

2) Applicant data from Annex 1

Assessed by *name*

Place Ningbo China, Date 2020-11-13

Lynn Park

(Test engineers signature)

Risk assessment for the above mentioned product indicates PAH relevance :

☒ Yes [1)]

☐ No

☐ Short statement

Rev. 4 on 2008-07-10