



**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..... : SHES190201150508
Date of issue..... : 2019-05-07, Amendment No. 7: 2022-12-02
Total number of pages : 13

Name of Testing Laboratory preparing the Report : SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.
588 West Jindu Road, Xinqiao, Songjiang, 201612 Shanghai, China

Applicant's name :
Address..... :

Test specification:

Standard : IEC 60335-2-2:2009, AMD1:2012, AMD2:2016 in conjunction with
IEC 60335-1:2010, COR1:2010, COR2:2010, AMD1:2013,
COR1:2014, AMD2:2016, COR1:2016
Test procedure : SGS-CSTC
Non-standard test method : N/A

Test Report Form No. : IEC60335_2_2K
Test Report Form(s) Originator : LCIE
Master TRF : Dated 2018-08-07

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Test item description :	Vacuum Cleaner
Trade Mark :	—
Manufacturer	Same as applicant
Model/Type reference	MC616, MC616A
Ratings	<p>Vacuum Cleaner: MC616: 22,2 V $\overline{\text{---}}$; 140 W; MC616A: 29,6 V $\overline{\text{---}}$; 140 W</p> <p>Adaptor for MC616: CZH015265050EUWH and CZH015265050BSWH, CZH015265050KRWH: Input: 100 V – 240 V; 50 Hz / 60 Hz; 0,5 A; Class II; Output: 26,5 V $\overline{\text{---}}$; 500 mA; YNQX12G265050VL: Input: 100 V – 240 V; 50 Hz / 60 Hz; 0,3 A; Class II; Output: 26,5 V $\overline{\text{---}}$; 500 mA;</p> <p>Adaptor for MC616A: CZH024350050EUWH and CZH024350050BSWH: Input: 100 V – 240 V; 50 Hz / 60 Hz; 0,8 A; Class II; Output: 35 V $\overline{\text{---}}$; 500 mA; CZH015350050BSWP: Input: 100 V – 240 V; 50 Hz / 60 Hz; 0,5 A; Class II; Output: 35 V $\overline{\text{---}}$; 500 mA; CZH015350050EUWH: Input: 100 V – 240 V; 50 Hz / 60 Hz; 0,5 A; Class II; Output: 35 V $\overline{\text{---}}$; 0,5 A; 17,5 W</p>

Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):		
<input checked="" type="checkbox"/>	Testing Laboratory:	SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.
	Testing location/ address.....:	588 West Jindu Road, Xinqiao, Songjiang, 201612 Shanghai, China.
	Tested by (name, function, signature).....:	Luke Li <i>Luke Li</i> Project Engineer
	Approved by (name, function, signature)....:	Sven Dong <i>Sven Dong</i> Project Reviewer
<hr/>		
<input type="checkbox"/>	Testing procedure: CTF Stage 1:	N/A
	Testing location/ address.....:	
	Tested by (name, function, signature).....:	
	Approved by (name, function, signature)....:	
<hr/>		
<input type="checkbox"/>	Testing procedure: CTF Stage 2:	N/A
	Testing location/ address.....:	
	Tested by (name + signature).....:	
	Witnessed by (name, function, signature) .:	
	Approved by (name, function, signature)....:	
<hr/>		
<input type="checkbox"/>	Testing procedure: CTF Stage 3:	N/A
<input type="checkbox"/>	Testing procedure: CTF Stage 4:	N/A
	Testing location/ address.....:	
	Tested by (name, function, signature).....:	
	Witnessed by (name, function, signature) .:	
	Approved by (name, function, signature)....:	
	Supervised by (name, function, signature) :	

List of Attachments (including a total number of pages in each attachment):	
None	
Summary of testing:	
Tests performed (name of test and test clause): Tests were carried out according the following standards: EN 60335-2-2: 2010 + A11: 2012 + A1: 2013 EN 60335-1: 2012 + A11: 2014 + A13: 2017 + A1: 2019 + A14: 2019 + A2: 2019 + A15: 2021 EN 62233: 2008 No tests.	Testing location: See page 3
Summary of compliance with National Differences (List of countries addressed): -EU Group Differences -DE (No National differences have been published in the CB Bulletin) EK decisions according to German ProdGS have been taken into account. PAH risk evaluation according to AfPS GS 2019:01 PAK (See PAH risk assessment report no. SHES190201150506/PAH) Battery pack evaluation to EK1 588-14. (See comments at representative models for full tests)	

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 National Certification Body that own these marks.

Label of appliance:

English:

German:

XXXXX indicated apaptor models listed in table 24.1

Label of motorized cleaning head:

English:

German:	
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Label of adaptor:
English:

Other adaptors' marking labels are same as above except for model name, technical data.

As declared by the applicant the importer was not decided at the time of application but will be marked on the products before placing them on the market.

For CE:

As declared by the applicant, the importer (and manufacturer, if it is different)'s name, registered trade name or registered trade mark and the postal address will be marked on the products before being place on the market. The contact details shall be in a language easily understood by end-users and market surveillance authorities.

For GS:

1. As declared by the applicant the authorized EEA representative or importer was not decided at the time of application, but will be marked on the products before placing them on the market
2. According to ProdSG Art. 6 when placing the products on the market the authorized representative / importer within the European Economic Area (EEA) must be marked on the product if the manufacturer is not located within the EEA. Marking on the packaging is only acceptable if it is not possible to place such markings on the product.

Test item particulars:	Hand-held appliance
Classification of installation and use:	Hand-held appliance
Supply Connection	Battery-operated appliance, charged by approved adaptor
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	N/A
Date (s) of performance of tests	N/A
General remarks:	
<p>"(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report.</p> <p>Throughout this report a <input checked="" type="checkbox"/> comma / <input type="checkbox"/> point is used as the decimal separator.</p> <p>This document is issued by the Company subject to its General Conditions of Service, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.</p> <p>Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.</p> <p>Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.</p>	
Manufacturer's Declaration per sub-clause 4.2.5 of IEC60335-2-2K:	
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	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> Not applicable
When differences exist; they shall be identified in the General product information section.	

Name and address of factory (ies)..... : Same as manufacturer

General product information and other remarks:

The appliance is hand-held dry vacuum cleaner only used for household.

MC616A was identical to MC616 except battery pack, main motor and brush motor.

Amendment 1 Report No. SHES190201150502

The original test report No. SHES190201150501 dated 2019-05-07 was modified on 2019-09-03 to include the following changes and/or additions, which were considered technical modifications:

1. Added alternative Adaptors: YNQX12G265050VL in this report, detail see table 24.1 in bold.
2. Modified Applicant, Manufacturer and factory address from '219 Shizhuang Road, Linhu Town, Wuzhong District, Suzhou, 215100 Jiangsu, China' to '2 Floor, 2 Building, 2588 Swan Dang Road, Wuzhong Economic Development, Suzhou 215100, Jiangsu China.'

After reviewing, tests described in 'summary of testing' were considered to be necessary.

Amendment 2 Report No. SHES190201150503

The original test report No. SHES190201150501 dated 2019-05-07 was additionally modified on 2020-01-08 to include the following changes and/or additions, which were considered technical modifications:

Added alternative Internal wire in this report, detail see table 24.1 in bold.

After reviewing, no test was considered to be necessary.

Amendment 3 Report No. SHES190201150504

The original test report No. SHES190201150501 dated 2019-05-07 was additionally modified on 2020-03-27 to include the following changes and/or additions, which were considered corrections:

1. Corrected adaptor (Model: YNQX12G265050VL) parameters, detail see table 24.1 in bold.

After reviewing, no test was considered to be necessary.

Amendment 4 Report No. SHES190201150505

The original test report No. SHES190201150501 dated 2019-05-07 was additionally modified on 2020-10-09 to include the following changes and/or additions, which were considered corrections:

1. Changed Model MC616 battery pack and battery cell manufacturer, details see 24.1 in bold.
2. Changed model MC616A battery pack certificate number, details see 24.1 in bold.
3. Updated standards from EN 60335-1: 2012 + A11: 2014 + A13: 2017 to EN 60335-1: 2012 + A11: 2014 + A13: 2017 + A1: 2019 + A14: 2019 + A2: 2019.

After reviewing, test described in 'Summary of testing' were considered to be necessary.

Amendment 5 Report No. SHES190201150506

The original test report No. SHES190201150501 dated 2019-05-07 was additionally modified on 2021-12-29 to include the following changes and/or additions, which were considered corrections:

1. Updated PHA report.

After reviewing, test described in 'Summary of testing' were considered to be necessary.

Amendment 6 Report No. SHES190201150507

The original test report No. SHES190201150501 dated 2019-05-07 was additionally modified on 2022-10-12 to include the following changes and/or additions, which were considered corrections:

1. Added alternative adaptor, details refer to 24.1 in bold.
2. Updated to latest standard EN 60335-1:2012/A15:2021.

After reviewing, test described in 'Summary of testing' were considered to be necessary.

Amendment 7 Report No. SHES190201150508

The original test report No. SHES190201150501 dated 2019-05-07 was additionally modified on 2022-12-02 to include the following changes and/or additions, which were considered corrections:

1. Added alternative adaptor, details refer to 24.1 in bold.

After reviewing, test described in 'Summary of testing' were considered to be necessary.

24.1	TABLE: Critical components information					P
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹)	
Adaptor (only for MC616)-GS	Shenzhen Chanzeho Technology Co., Ltd.	CZH015265 050EUWH	Input:100 - 240 V AC; 50 / 60 Hz; 0,5 A; Output: 26,5 VDC; 500 mA	IEC/EN 60335-1 IEC/EN 61558-2-16	TUV Z1A 097714 0013	
Alt (only for MC616)-GS	Shenzhen qixin Electronics Co., Ltd	YNQX12G26 5050VL	Input:100 - 240 V AC; 50 / 60 Hz; 0,3 A; Output: 26,5 VDC; 500 mA	IEC/EN 61558-2-16	TUV Z1A 089935 0015	
Alt (only for MC616)	Shenzhen Chanzeho Technology Co., Ltd.	CZH0152650 50BSWH	Input:100 - 240 V AC; 50 / 60 Hz; 0,5 A; Output: 26,5 VDC; 500 mA	IEC/EN 60335-1 IEC/EN 61558-2-16	CE:NA8A 097714 0011	
Alt (only for MC616)	Shenzhen Chanzeho Technology Co., Ltd.	CZH0152650 50KRWH	Input:100 - 240 V AC; 50 / 60 Hz; 0,5 A; Output: 26,5VDC; 500 mA	IEC/EN 60335-1 IEC/EN 61558-2-16	HU10933- 18002B	
Adaptor (only for MC616A)-GS	Shenzhen Chanzeho Technology Co., Ltd.	CZH0243500 50EUWH	Input:100 - 240 V AC; 50 / 60 Hz; 0,8 A; Output:35 VDC; 500 mA	IEC/EN 60335-1 IEC/EN 61558-2-16	TUV Z1A 17 10 99714 007	
Alt. (only for MC616A)-GS	Shenzhen CHANZEHO Technology Co., Limited	CZH0153500 50EUWH	Input: 100-240 V AC; 50 / 60 Hz; 0,5 A; Output: 35 VDC; 0,5 A; 17,5 W	EN 60335-1 EN 60335-2-29	TUV Z1A 097714 0020 Rev. 02	
Alt. (only for MC616A)	Shenzhen CHANZEHO Technology Co., Limited	CZH0153500 50EUWH	Input: 100-240 V AC; 50 / 60 Hz; 0,5 A; Output: 35 VDC; 0,5 A; 17,5 W	EN 60335-1 EN 60335-2-29	TUV N8A 097714 0018 Rev. 01	
Alt (only for MC616A)	Shenzhen Chanzeho Technology Co., Ltd.	CZH0243500 50BSWH	Input:100 - 240 VAC; 50 / 60 Hz; 0,8 A; Output:35 VDC; 500 mA	IEC/EN 60335-1 IEC/EN 61558-2-16	TUV N8A 17 10 99714 009	
Alt (only for MC616A)	Shenzhen CHANZEHO Technology Co., Limited	CZH0153500 50BSWP	Input:100 - 240 VAC; 50 / 60 Hz; 0,5 A Output: 35 VDC; 500 mA	EN 60335-1 EN 60335-2-29	TUV No. N8AUK 097714 0090 Rev. 00	
Battery cell (Only for Model MC616A)	Xi'an SAFTY Energy Technology Co., Ltd.	SF18650NR-22	3,7 VDC; 2200 mAh	IEC/EN 62133:2017	JPTUV- 092906-M1	

Alt. (Only for Model MC616)	Xinxiang Qixin Power Source Materials Co., Ltd.	ICR18650-2200mAh	3,7 VDC; 2200 mAh	IEC/EN 62133:2017	JPTUV-087420
Battery pack (Only for Model MC616)	Suzhou Sheng xu Electronics Co., Ltd	MC-616	22,2 VDC; 2200 mAh	IEC/EN 62133:2017	SGS SHES20070 1417501
Alt. (Only for Model MC616A)	Suzhou Sheng xu Electronics Co., Ltd	MC-616A	29,6 VDC; 2200 mAh	IEC/EN 62133:2017	SGS SHES20050 0966001
Internal wire	ZHONGSHAN FUYUANTONG WIRE & CABLE Co., Ltd.	1007	16 – 24 AWG; 80 °C; 300 V	IEC/EN 60335-1 IEC/EN 60335-2-2	E241989 Tested with appliance
Alt	Dongguan chengxing Electric wire Co., Ltd.	1007	16 – 24 AWG; 80 °C; 300 V	IEC/EN 60335-1 IEC/EN 60335-2-2	E249743 Tested with appliance
Alt	KUNSHAN HUAFENG WIRE & CABLE Co., Ltd.	1007	16 – 24 AWG; 80 °C; 300 V	IEC/EN 60335-1 IEC/EN 60335-2-2	E219420 Tested with appliance
Alt	SUZHOU LONG CHANG PLASTIC & CABLE Co., Ltd.	1007	16 – 24 AWG; 80 °C; 300 V	IEC/EN 60335-1 IEC/EN 60335-2-2	E233980 Tested with appliance
Alt	SUZHOU DIAN HANG ELECTRONIC CO LTD	1007	16 – 24 AWG; 80 °C; 300 V	IEC/EN 60335-1 IEC/EN 60335-2-2	E354173 Tested with appliance
Main Motor (only for MC616)	Suzhou Yongjie Motor Co., Ltd.	YDBR545551 9G	DC 22,2 V; 140 W; Class B	IEC/EN 60335-1 IEC/EN 60335-2-2	Tested with appliance
Main Motor (only for MC616A)	Suzhou Yongjie Motor Co., Ltd.	YDBR545472 5B	DC 29,6 V; 140 W; Class B	IEC/EN 60335-1 IEC/EN 60335-2-2	Tested with appliance
Brush motor (only for MC616)	Suzhou Puming Elec-tric Appliance Parts Co., Ltd.	PM-385-30285	DC 22,2 V; 10 W; Class120	IEC/EN 60335-1 IEC/EN 60335-2-2	Tested with appliance
Brush motor (only for MC616A)	Suzhou Puming Elec-tric Appliance Parts Co., Ltd.	PM-385-30286	DC 29,6 V; 10 W; Class120	IEC/EN 60335-1 IEC/EN 60335-2-2	Tested with appliance
PCB	KINGBOARD LAMINATES HOLDINGS LTD	KB-6150	Thickness min:1,6 mm	IEC/EN 60335-1 IEC/EN 60335-2-2	E123995 Tested with appliance
Handle/ enclosure	Shinho (Changzhou) Petrochemical Co., Ltd.	ABS AC800	Thickness: 2,0 mm Min.	IEC/EN 60335-1 IEC/EN 60335-2-2	Tested with appliance

Supplementary information:

- 1) **Provided evidence ensures the agreed level of compliance. See OD-CB2039.**
- 2) **License available upon request.**

---End of Report---