



# TEST REPORT

EN 60 335-2-32

## Household and similar electrical appliances – Safety – Part 2-32: particular requirements for massage appliances

Report Reference No. .... : JSH007071040-001

Compiled by (+ signature)..... : Harrison Yao 

Approved by (+ signature)..... : Navy Wang 

Date of issue ..... : Mar. 18, 2008; Amendment 13: Jun. 22, 2016

Contents..... : 10 pages test report

### Testing Laboratory

Name ..... : Intertek Testing Services Shanghai

Address..... : Building No.86, 1198 Qinzhou Road (North), Shanghai 200233, China

Testing location/ procedure..... : TL ☒ RMT ☐ SMT ☐ WMT ☐ TMP ☐

Testing location ..... : As above

### Applicant

Name ..... : 

Address ..... : 

### Test specification

Standard..... : EN 60335-2-32:2003+A1:2008+A2:2015  
EN 60335-1:2012+AC:2014+A11:2014  
EN 62233:2008

Test procedure..... : --

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

### Test Report

Test Report Form No. .... : TTRF\_IECEN60335\_2\_32A"

TRF Originator ..... : Intertek Testing Services Shanghai

Master TRF ..... : Dated 2006-05

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TRF No. TTRF\_IECEN60335\_2\_32A"

<b>Test item</b>	
Description.....:	Foot bath massager
Trade Mark .....	/
Model and/or type reference.....:	FM-588A, FM-588B, FM-588C, FM-588A2, FM-588B2, FM-588C2
Manufacturer .....	Ningbo Longfu Electrical Appliances & Tool Co., Ltd.
Rating(s) .....	220-240V~, 50Hz, 60W, Class II
.....:	
<b>Test item particulars</b>	
Protection against electric shock .....	: Class II
Classification of installation .....	: Portable appliance
Intended use.....	: Household indoor use
Supply connection .....	: Type Y
IP number .....	: IPX0
Switch .....	: Yes
Thermal cut-out .....	: No
Electronic circuit.....	: Yes
Timer.....	: No
Motor.....	: Yes
Low voltage motor .....	: Yes
Transformer.....	: No
Heating element .....	: Yes
Lamp.....	: No
<b>Possible test case verdicts</b>	
- 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)
<b>Testing</b>	
Date of receipt of test item .....	: Mar. 08, 2016
Date (s) of performance of tests .....	: Mar. 15, 2016 to Mar. 17, 2016

### 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 is used as the decimal separator.

When determining of test conclusion, measurement uncertainty of test has been considered.

PAH test according to AfPS GS 2014:01 PAK was considered and passed, please refer to PAH test report 160300240HZH-001-PAH including Amendment1 dated on 2016-06-22

**This test report should be read in conjunction with the Constructional Data Form (CDF).**

### General product information

The products covered by this test report are portable and cord-connected appliances for general household and indoor use only.

FM-588A, FM-588B and FM-588C are identical except for different water cover, which do not affect the performance.

FM-588A2, FM-588B2 and FM-588C2 are same as FM-588A, FM-588B and FM-588C respectively except they have an additional vibration motor circuit.

Factory information is same as the manufacture (applicant).

### 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 standard.

FM-588C2 as representative model subjects to complete test and only the most unfavorable results are recorded

### Amendment 13:

The original Test report No. JSH007071040-001, dated Mar. 18, 2008, with its amendment 1 to 11, the last one dated Nov. 07, 2014, was modified on Jun. 22, 2016 to include the following changes and/or additions:

1. Add AC:2014+A11:2014 of EN 60335-1:2012
2. Add A2: 2015 of EN 60335-2-32: 2003
3. PAH test is re-evaluated according to AfPS GS 2014:01 PAK.
4. Replace some alternative manufacturers of power plug and cord, add alternative internal wire and heating wire
5. Add cords H03VV-F, H05VV-F and H05VVH2-F

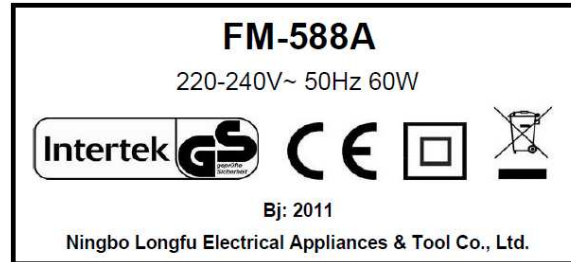
Clause concerned: 23, 24, 25

Annex of A2:2015 for EN 60335-2-32: 2003,

Annex of EN 60335-1/A11:2014 and EN 60335-1/AC:2014

**Copy of marking plate:**

(Representative)

**Note:**

When the equipment is vended to EU, then name and address of the importer or authorized representative within the EEA shall be added on the equipment.

Marking plates for all models are same as above except for model number.

IEC 60335-2-32			
Clause	Requirement - Test	Result - Remark	Verdict
23	INTERNAL WIRING		
23.5	The insulation of internal wiring withstanding the electrical stress likely to occur in normal use		P
	No breakdown when a voltage of 2000 V is applied for 15 min between the conductor and metal foil wrapped around the insulation		P
24	COMPONENTS		
24.1.3	Switches complying with IEC 61058-1, the number of cycles of operation being at least 10 000, or		P
25	SUPPLY CONNECTION AND EXTERNAL FLEXIBLE CORDS		
25.7	- light polyvinyl chloride sheathed cord (60227 IEC 52), appliance not exceeding 3 kg	<3kg, H03VVH2-F, H03VV-F	P
	- ordinary polyvinyl chloride sheathed cord (60227 IEC 53), appliance exceeding 3 kg	<3kg, H05VVH2-F, H05VV-F	P
25.15	Conductors of the supply cord relieved from strain, twisting and abrasion by use of cord anchorage		P
	The cord cannot be pushed into the appliance to such an extent that the cord or internal parts of the appliance can be damaged		P
	Pull and torque test of supply cord, values shown in table 10: pull (N); torque (not on automatic cord reel) (Nm) ..... :	2kg; 60N; 0,25Nm	P
	the cord not damaged and no appreciable strain at the terminals		P
	The pull force is reapplied		P
	displacement of the cord not moved more than 2 mm	Max. 0,8mm	P

ANNEX of A2:2015 for EN 60335-2-32: 2003			
Clause	Requirement - Test	Result - Remark	Verdict
8	Protection against access to live parts		--
8.1.4	<i>Addition:</i> All energized parts in foot massage appliances that use water are considered to be live parts.		N/A
24	Components		--
24.2	<i>Add the following to the modification:</i> Massage chairs and massage beds may be fitted with a control in the flexible cord, provided that the length of the flexible cord is such that the control cannot make contact with the floor in normal use.		N/A

<b>ANNEX of A2:2015 for EN 60335-2-32: 2003</b>			
Clause	Requirement - Test	Result - Remark	Verdict
	A control that does not contain live parts may be fitted in the flexible cord regardless of the length of the cord.		N/A

## Appendix:

<b>EN 60335-1/A11:2014 and EN 60335-1/AC:2014</b>			
Clause	Requirement + Test	Result - Remark	Verdict
8	PROTECTION AGAINST ACCESS TO LIVE PARTS		—
8.1.1	Test probe B and probe 18 of EN 61032 are applied with a force not exceeding 1 N, the appliance being in every possible position,		P
	except that appliances normally used on the floor and having a mass exceeding 40kg are not tilted.		N/A

24.1	TABLE: Components					P
Object / part No.	Manufacturer / trademark	Type / model	Technical data	Standard	Mark(s) of conformity	
<b>Power plug</b>	Shangyu Jintao Electron Co., Ltd.	JT002/B	250V~ 16A DIN 49406-R White PVC	VDE 0620-1 AfPS GS 2014:01 PAK	VDE/ 40021698+ Tested with appliance	
- Alternative	Ningbo Qiaopu Electric Co., Ltd.	D02	250V~ 16A DIN 49406-R White PVC	VDE 0620-1 AfPS GS 2014:01 PAK	VDE/ 40002875+ Tested with appliance	
- Alternative	Yuyao Yunbiao Electronics Co.,Ltd	YB002	250V~ 16A DIN 49406-R White PVC	VDE 0620-1 AfPS GS 2014:01 PAK	VDE/ 40009986+ Tested with appliance	
- Alternative	Yuyao Haidebao Electrical Appliance Co., Ltd.	HDB-02	250V~ 16A DIN 49406-R White PVC	VDE 0620-1 AfPS GS 2014:01 PAK	VDE*/ 40034743+ Tested with appliance	
- Alternative	Yuyao Yunbiao Electronics Co.,Ltd	YB001	250V~ 2,5A Standard sheet 1 White PVC	EN 50075 AfPS GS 2014:01 PAK	VDE/ 40002984+ Tested with appliance	
- Alternative	Shangyu Jintao Electron Co., Ltd.	JT001	250V~ 2,5A Standard sheet 1 White PVC	EN 50075 AfPS GS 2014:01 PAK	VDE/ 40020667+ Tested with appliance	
- Alternative	Ningbo Qiaopu Electric Co., Ltd.	D01	250V~ 2,5A Standard sheet 1 White PVC	EN 50075 AfPS GS 2014:01 PAK	VDE/ 40001746+ Tested with appliance	
- Alternative	Yuyao Haidebao Electrical Appliance Co., Ltd.	HDB-01	AC250V 2,5A Standard sheet1 White PVC	EN 50075 AfPS GS 2014:01 PAK	VDE*/ 40034768+ Tested with appliance	
Power plug for UK	Ningbo Yunhuan Electronics Group Corporation	Y006, Y006A	AC250V, 13A, 3A or 6A	BS1363-1	BSI/ KM45980	
- Alternative	Ningbo Qiaopu Electric Co., Ltd.	D09	AC250V, 13A	BS1363-1	ASTA/ No.930	
- Alternative	Yuyao Yunbiao Electronics Co., Ltd.	YB006, YB006A	AC250V, 13A	BS1363-1	BSI/ KM73093	
- Alternative	Shangyu Jintao Electron Co., Ltd.	JT006A	AC250V~, 13A	BS1363-1	ASTA*/NO.11 20	
- Alternative	Yuyao Haidebao Electrical Appliance Co., Ltd.	HDB-08	AC250V~, 13A	BS1363-1	ASTA*/NO.11 09	
<b>Supply cord <sup>2)</sup></b>	Shangyu Jintao Electron Co., Ltd.	H03VV-F H03VVH2-F H05VV-F H05VVH2-F	2 x 0,5mm <sup>2</sup> or 2 x 0,75mm <sup>2</sup> White PVC	EN 50525-2-11 AfPS GS 2014:01 PAK	VDE/ 40013419+T ested with appliance	

24.1	TABLE: Components					P
Object / part No.	Manufacturer / trademark	Type / model	Technical data	Standard	Mark(s) of conformity	
- Alternative	Ningbo Qiaopu Electric Co., Ltd.	H03VV-F H03VVH2-F H05VV-F H05VVH2-F	2 x 0,5mm <sup>2</sup> or 2 x 0,75mm <sup>2</sup> White PVC	EN 50525-2-11 AfPS GS 2014:01 PAK	VDE/ 40035976+T ested with appliance	
- Alternative	Yuyao Yunbiao Electronics Co., Ltd.	H03VV-F H03VVH2-F H05VV-F H05VVH2-F	2 x 0,5mm <sup>2</sup> or 2 x 0,75mm <sup>2</sup> White PVC	EN 50525-2-11 AfPS GS 2014:01 PAK	VDE/ 138242+Tes ted with appliance	
- Alternative	Yuyao Haidebao Electrical Appliance Co., Ltd.	H03VV-F H03VVH2-F H05VV-F H05VVH2-F	2 x 0,5mm <sup>2</sup> or 2 x 0,75mm <sup>2</sup> White PVC	EN 50525-2-11 AfPS GS 2014:01 PAK	VDE*/40034 583+Tested with appliance	
<b>Switch</b>	Yuyao Tongyong Electronics Co., Ltd.	CYD-1403	250V~ 2(1)A	EN 60335-2-32 EN 60335-1	Tested with appliance	
- Alternative	Ningbo Huali Electronic Co., Ltd.	RBS	250V~ 1,5A T105 10E3	EN 61058-1	VDE/ 40027808	
- Alternative	Ningbo Master Soken Electrical Co., Ltd.	RT5	250V~ 3(1)A T85 1E4	EN 61058-1	TUV/ R50289618	
- Alternative	Merchant Corporation Ltd.	ST-800	250V~ 3(1)A T85 10000	EN 61058-1	KEMA/ NO. 2106130.05	
<b>Fuse</b>	Shenzhen Lanson Electronics Co. Ltd.	Series 5J F1AL250V	250V~ 1A, Marking on fuse: F1AL250V	EN 60127-1 EN 60127-2	VDE/ 40009306	
- Alternative	Hollyland Company Limited	50F	250V~ 1A	EN 60127-1 EN 60127-2	VDE/ 40014477	
- Alternative	XC Electronics (ShenZhen) Corp.Ltd	5F	250V~ 1A	EN 60127-1 EN 60127-2	VDE/ 40009609	
<b>Fuse holder</b>	Ningbo Longfu Electrical Appliances & Tool Co., Ltd.	FH01	5*20	EN 60335-2-32 EN 60335-1	Tested with appliance	
<b>Internal wire</b>	Yuyao Shi Yunlou Touch Parts Factory	RV-90	300V 0,5/0,75mm <sup>2</sup> T90 CCC Cert.: 2005010105153288	EN 60335-2-32 EN 60335-1	Tested with appliance	
Internal wire	Cixi Shuanghong Wire Co., Ltd.	H05S-K H05SJ-K	450V 0,5/ 0,75mm <sup>2</sup> T180	DIN VDE 0282- 3	VDE/ 40017324	
- Alternative	Yuyao Huawei Electronic Appliances Co., Ltd.	RV-90	300V 0,5/0,75mm <sup>2</sup> T90, CCC Cert. No.: 2002010105015202	EN 60335-2-32 EN 60335-1	Tested with appliance	
- Alternative	Yuyao New Riyue Cable Industry and Trade Co., Ltd.	RV-90	300V 0,5/0,75mm <sup>2</sup> T90 CCC Cert.: 2004010105114160	EN 60335-2-32 EN 60335-1	Tested with appliance	



24.1	TABLE: Components					P
Object / part No.	Manufacturer / trademark	Type / model	Technical data	Standard	Mark(s) of conformity	
- Alternative	Yuyao Hongfeng Wire & Cable Co., Ltd.	RV-90	300V 0,5/0,75mm <sup>2</sup> , T90, CCC Cert. No.: 2003010105042639	EN 60335-2-32 EN 60335-1	Tested with appliance	
- Alternative	Yuyao Shi Yunlou Touch Parts Factory	RV <sup>4)</sup>	300V 0,5/0,75mm <sup>2</sup>	EN 60335-2-32 EN 60335-1	Tested with appliance	
- Alternative	Yuyao Yongfeng	RV-90	300V/500V T90 0,5/0,75mm <sup>2</sup> , CQC Cert: 2003010105029257	EN 60335-2-32 EN 60335-1	Tested with appliance	
<b>Terminal block</b>	Shenzhen Hongyu Electrical Co., Ltd.	HYT-230	450V 17,5A 0,75-1,5mm <sup>2</sup> T110	EN 60335-2-32 EN 60335-1	VDE/ 40020423	
- Alternative	Shenzhen Hongyu Electrical Co., Ltd.	HYT-500	450V 24A 1,0-2,5mm <sup>2</sup> T110	EN 60335-2-32 EN 60335-1	VDE/ 40020423	
- Alternative	Openwise Industrial Ltd.	500	450V 24A 1,0-2,5mm <sup>2</sup> T110	EN 60335-2-32 EN 60335-1	VDE/ 40022325	
<b>Wire connectors</b> <sup>3)</sup>	HEAVY POWER CO LTD	CE2X, CE2, CE5X or CE5	-	EN 60335-2-32 EN 60335-1	Tested with appliance	
<b>Air pump</b>	Ningbo Longfu Electrical Appliances & Tool Co., Ltd.	LF-01	AC 220-240V 50Hz Class 120	EN 60335-2-32 EN 60335-1	Tested with appliance	
- Alternative	Yuyao Jin'an electrical accessories factory	SS-P6-230V	AC 220-240V 50Hz Class 120	EN 60335-2-32 EN 60335-1	Tested with appliance	
<b>Heating wire</b>	Dongguan Shi Feng Cheng Electric Heating Appliances Co., Ltd.	--	Silicone rubber insulated; 420Ω/m	EN 60335-2-32 EN 60335-1	Tested with appliance	
- Alternative	SHENZHEN XINGGUANG ELECTRIC PRODUCT CO LTD	3323	Silicone rubber insulated, 420Ω/m	EN 60335-2-32 EN 60335-1	Tested with appliance	
- Alternative	DONG GUANSHUN INDUSTRY CO LTD	3342	Silicone rubber insulated, 420Ω/m	EN 60335-2-32 EN 60335-1	Tested with appliance	
- Alternative	DONGGUAN NISTAR TRANSMITTING TECHNOLOGY CO INC	3323	Silicone rubber insulated, 420Ω/m (E214184)	EN 60335-2-32 EN 60335-1	Tested with appliance	
<b>One-way valve</b>	Ningbo Longfu Electrical Appliances & Tool Co., Ltd.	V01	-	EN 60335-2-32 EN 60335-1	Tested with appliance	
<b>PCB</b>	Yuyao Tongyong Electronics Co., Ltd.	588	-	EN 60335-2-32 EN 60335-1	Tested with appliance	

24.1	TABLE: Components					P
Object / part No.	Manufacturer / trademark	Type / model	Technical data	Standard	Mark(s) of conformity	
- Alternative	Yuyao Qinglong Electrical Appliances Co., Ltd.	588	-	EN 60335-2-32 EN 60335-1	Tested with appliance	
- Alternative	Yuyao Qinglong Electrical Appliances Co., Ltd.	FM-588	-	EN 60335-2-32 EN 60335-1	Tested with appliance	
<b>Base material of PCB</b>	HANGZHOU JIUZHOU PRINTED CIRCUIT BOARD CO LTD	JZ-1 or JZ-2	94V-0, 1,2mm Min. thick, UL/E310681	EN 60335-2-32 EN 60335-1	Tested with appliance	
- Alternative	WUJIANG DONGFENG ELECTRONICS CO LTD	DF-2H	94V-0, 1,2mm Min. thick, UL/E199900	EN 60335-2-32 EN 60335-1	Tested with appliance	
<b>Motor( for FM-588A2, FM-588B2, FM-588C2)</b>	Ningbo Baoshijie Electric Appliance Co.,Ltd	RS-385S	24V d.c., Class 120	EN 60335-2-32 EN 60335-1	Tested with appliance	
<b>Motor bracket ( for FM-588A2, FM-588B2, FM-588C2)</b>	Sinopec Yangzi Petrochemical Co., Ltd.	PP (F401)	Min. thickness: 1,5mm	EN 60335-2-32 EN 60335-1	Tested with appliance	
<b>Enclosure</b>	Sinopec Yangzi Petrochemical Co., Ltd.	PP (F401)	Min. thickness: 2,0mm	EN 60335-2-32 EN 60335-1	Tested with appliance	
<b>Capacitor ( for FM-588A2, FM-588B2, FM-588C2)</b>	Rugao Shuangcheng Electronic Co., Ltd.	CBB22	400V~ or 500V~ , 255K 2,5µF 400V~ or 500V~ , 564K 0,56µF	EN 60335-2-32 EN 60335-1	Tested with appliance	
<b>Container</b>	Sinopec Yangzi Petrochemical Co., Ltd	PP (F401)	White or pale blue	EN 60335-2-32 EN 60335-1 AfPS GS 2014:01 PAK	Tested with appliance	
<b>Massage head</b>	Sinopec Yangzi Petrochemical Co., Ltd.	PP (F401)	Pale blue	EN 60335-2-32 EN 60335-1 AfPS GS 2014:01 PAK	Tested with appliance	
Please refer to the latest edition of the Constructional Data Form (CDF) issued for this test report.						
4) For models FM-588A/B/C only.						