CMA 2011002171A

TESTING CNAS L0095

DAkkS Deutsche Akkreditierungsstelle D-PL-17198-01-01

检 验 报 告

TEST REPORT

产品名称：
NAME OF SAMPLE: BATHTUB

受检单位：
CLIENT: Pinghu Zhangshi Sanitary Ware Factory

检验类别：
CLASSEFICATION OF TEST: Commission Test

Vkan Certification & Testing Co., Ltd.
(**CVC**)

TEST REPORT

Name of product: Massage Bathtub	Trade mark: --
Type/Model: ZS-8002 ZS-8018 ZS-8026 ZS-8030 ZS-8006 ZS-8032 ZS-8208 ZS-8305 ZS-8003 ZS-8027 ZS-8008 ZS-9028 ZS-9029 ZS-1382 220-230V ~ 50Hz 2710W IPX5	Sample status: --
Manufacturer: Pinghu Zhangshi Sanitary Ware Factory	Commissioned by: Pinghu Zhangshi Sanitary Ware Factory
Manufacturer address: No.3 Xujia Weir ,Team3 Shuguang Village, Zhongdai Town, Pinghu City, Zhejiang Province, 314213, P.R .China	Commissioner address: No.3 Xujia Weir ,Team3 Shuguang Village, Zhongdai Town, Pinghu City, Zhejiang Province, 314213, P.R .China
Quantity of sample: 1 PC of each models	Sampled by: --
Sample identification: --	Sampling at (place): --
Means of receiving: Manufacturer Sending	Means of sampling: --
Classification of test: Commission Test	Sampling date: --
Receiving date: 2012.08.07	Completing date: 2012.12.13
Tested according to: IEC 60335-2-60:2002 (3rd edition) + A1:2005 IEC 60335-1:2001(incl. Corrigendum 1:2002)+A1:2004+A2:2006 (incl. Corrigendum 1:2006)	Test item: Full safety test

Test conclusion:

The appliance submitted by the client is tested according to the following standards:
IEC 60335-1:2001(incl. Corrigendum 1:2002)+A1:2004+A2:2006 (incl. Corrigendum 1:2006) Household and similar electrical appliances- Safety-Part 1: General Requirements,
IEC 60 335-2-60:2002 (3rd edition) + A1:2005 Household and similar electrical appliances- Safety Part 2: Particular requirements for whirlpool baths and whirlpool spas (IEC 60335-2-60 Ed 3.1, MOD),

Result: PASS.

Seal of CVC

Date of issue: 2012.12.13

Approved by: Chen Cankun Reviewed by: Zhou Fenghua Tested by: Chen Bingda

Summary of testing:	
Tests performed (name of test and test clause): Full safety tests.	**Testing location:** Vkan Certification & Testing Co., Ltd. (CVC)
Summary of compliance with National Differences: No National Differences.	

Copy of marking plate

Product	BATHTUB		Model	ZS-8002	
Voltage	220-230V~	Frequency	50Hz	Power	2710W
Size	1350x1350x650mm		Waterproof	IPX5	
Manufacturer: Pinghu Zhangshi Sanitary Ware Factory					

Product	BATHTUB		Model	ZS-8018	
Voltage	220-230V~	Frequency	50Hz	Power	2710W
Size	1500x1500x650mm		Waterproof	IPX5	
Manufacturer: Pinghu Zhangshi Sanitary Ware Factory					

Product	BATHTUB		Model	ZS-8026	
Voltage	220-230V~	Frequency	50Hz	Power	2710W
Size	1500x1500x730mm		Waterproof	IPX5	
Manufacturer: Pinghu Zhangshi Sanitary Ware Factory					

Product	BATHTUB		Model	ZS-8030	
Voltage	220-230V~	Frequency	50Hz	Power	2710W
Size	1400x1400X700mm		Waterproof	IPX5	
Manufacturer: Pinghu Zhangshi Sanitary Ware Factory					

Product	BATHTUB		Model	ZS-8006	
Voltage	220-230V~	Frequency	50Hz	Power	2710W
Size	1350X1350X2200mm		Waterproof	IPX5	
Manufacturer: Pinghu Zhangshi Sanitary Ware Factory					

Product	BATHTUB		Model	ZS-8032	
Voltage	220-230V~	Frequency	50Hz	Power	2710W
Size	1500x1500x700mm		Waterproof	IPX5	
Manufacturer: Pinghu Zhangshi Sanitary Ware Factory					

Product	BATHTUB		Model	ZS-8208	
Voltage	220-230V~	Frequency	50Hz	Power	2710W
Size	1350x1350x650mm		Waterproof	IPX5	
Manufacturer: Pinghu Zhangshi Sanitary Ware Factory					

Product	BATHTUB		Model	ZS-8305	
Voltage	220-230V~	Frequency	50Hz	Power	2710W
Size	800X1700X650mm		Waterproof	IPX5	
Manufacturer: Pinghu Zhangshi Sanitary Ware Factory					

Product	BATHTUB		Model	ZS-8003	
Voltage	220-230V~	Frequency	50Hz	Power	2710W
Size	1300x1800x650mm		Waterproof	IPX5	
Manufacturer: Pinghu Zhangshi Sanitary Ware Factory					

Product	BATHTUB		Model	ZS-8027	
Voltage	220-230V~	Frequency	50Hz	Power	2710W
Size	1250x1700x700mm		Waterproof	IPX5	
Manufacturer: Pinghu Zhangshi Sanitary Ware Factory					

Product	BATHTUB		Model	ZS-8008	
Voltage	220-230V~	Frequency	50Hz	Power	2710W
Size	850x1700x650mm		Waterproof	IPX5	
Manufacturer: Pinghu Zhangshi Sanitary Ware Factory					

Copy of marking plate

Product	BATHTUB		Model	ZS-9028	
Voltage	220-230V~	Frequency	50Hz	Power	2710W
Size	2000x1060x550mm		Waterproof	IPX5	
Manufacturer: Pinghu Zhangshi Sanitary Ware Factory					

Product	BATHTUB		Model	ZS-9029	
Voltage	220-230V~	Frequency	50Hz	Power	2710W
Size	1380x1380x580mm		Waterproof	IPX5	
Manufacturer: Pinghu Zhangshi Sanitary Ware Factory					

Product	BATHTUB		Model	ZS-1382	
Voltage	220-230V~	Frequency	50Hz	Power	2710W
Size	2000x2500x950mm		Waterproof	IPX5	
Manufacturer: Pinghu Zhangshi Sanitary Ware Factory					

Test item particulars:

Classification of installation and use ..... : Stationary appliance
Supply Connection ..... : A set of terminals
Class of protection ..... : Class I
Degree of protection ..... : IP X5
..... :
..... :
Whirlpool bath ..... : Yes
Whirlpool spa ..... : No
Whirlpool spa located outdoor ..... : No
Provided with blower ..... : No
Provided with pump ..... : Yes
Provided with ozone generator ..... : No
Thermal cut-out ..... : Yes
Heating element ..... : Yes
External supplied hot water ..... : No
Automatically drained after each use ..... : No
Level switch ..... : No
Appliance with luminaries ..... : Yes
Replaceable lamp ..... : No
..... :

.....:

.....:

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 .....: 2012.08.07

Date (s) of performance of tests .....: 2012.08.07-2012.12.13

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 point is used as the decimal separator.

General product information:

The size of the product is 1350mm×1350mm×650mm.

Full safety test was carried out on model ZS-8002. Test of clause 7, clause 22, clause 24 was carried out on the other models.

$P_{230V}= \frac{(230)^2}{(225)^2} \times 2710\,W = 2831,8W$ $P_{220V} = \frac{(220)^2}{(225)^2} \times 2710\,W = 2590,9W$

All models have different shape size and appearance (see the photos).

Factory: Pinghu Zhangshi Sanitary Ware Factory
Address: No.3 Xujia Weir ,Team3 Shuguang Village, Zhongdai Town, Pinghu City, Zhejiang Province, 314213, P.R .China

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
5	**GENERAL CONDITIONS FOR THE TESTS**		P
	Tests performed according to cl. 5, e.g. nature of supply, sequence of testing, etc.		P
5.7	If the tests are influenced by the temperature of the water, it bis manteined at 40 °C (IEC 60335-2-60)		N/A
	Or at the maximum value allowed by the control (IEC 60335-2-60)		N/A
6	**CLASSIFICATION**		P
6.1	Protection against electric shock: Class 0, 0I, I, II, III .....:	Class I	P
6.1	Portable appliances: protection against electric shock: Class II, III .....: (IEC 60335-2-60)		N/A
	Stationary appliances: protection against electric shock: Class I, II, III .....: (IEC 60335-2-60)	Class I	P
6.2	Protection against harmful ingress of water		P
	Whirlpool bath and whirlpool spa appliances at least IPX5 (IEC 60335-2-60)	IPX5	P
	Other appliances at least IPX4 (IEC 60335-2-60)		N/A
7	**MARKING AND INSTRUCTIONS**		P
7.1	Rated voltage or voltage range (V) .....:	220-230V	P
	Nature of supply.....:	~	P
	Rated frequency (Hz) .....:	50Hz	P
	Rated power input (W):.....:	2710	P
	Rated current (A) .....:		P
	Manufacturer's or responsible vendor's name, trademark or identification mark.....:	Pinghu Zhangshi Sanitary Ware Factory	P
	Model or type reference.....:	ZS-8002,others see page 2	P
	Symbol 5172 of IEC 60417, for Class II appliances		N/A
	IP number, other than IPX0.....:	IPX5	P
	The enclosure of electrically-operated water valves incorporated in external hose-sets for connection of an appliance to the water mains marked with symbol IEC 60417-5036 (DB:2002-10) if their working voltage exceeds extra-low voltage. (IEC 60335-1/A1)		N/A

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
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	220-230V	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
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
	the power input is related to the arithmetic mean value of the rated voltage range (IEC 60335-1/A2)	225V	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
7.7	Connection diagram fixed to appliances to be connected to more than two supply conductors and appliances for multiple supply		N/A
7.8	Except for type Z attachment, terminals for connection to the supply mains indicated as follows:		P
	- marking of terminals exclusively for the neutral conductor (N)		P
	- marking of protective earthing terminals (symbol 5019 of IEC 60417)		P
	- marking not placed on removable parts		P
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
	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		P
7.12	Instructions for safe use provided		P
	Instructions providing cleaning details and other maintenance (IEC 60335-2-60)		P
	Instructions for portable appliances states that no part of the appliance is to be located above the bath during use (IEC 60335-2-60)		N/A
	Instructions for whirlpool spas providing information concerning: (IEC 60335-2-60)		P

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
	- Maintenance of water purIty, especially pH values and chlorine concentrations. (IEC 60335-2-105)	Instructions prescribe	P
	- Cleaning and disinfection. (IEC 60335-2-105)		P
	- Use and installation of a cover. (IEC 60335-2-105)		P
	- Disposal of water. (IEC 60335-2-105)		P
	- Precaution to avoid damage due to water freezing. (IEC 60335-2-105)		P
	- Precaution to avoid damage when the appliance is left empty for an extended period. (IEC 60335-2-105)		P
7.12.1	Sufficient details for installation supplied		P
	Instructions for installation: (IEC 60335-2-60)		P
	- parts containing live parts, except parts supplied with safety extra-low voltage not exceeding 12 V, must be inaccessible to a person in the bath (IEC 60335-2-60)		P
	- earthed appliances must be permanently connected to fixed wiring (IEC 60335-2-60)		P
	- parts incorporating electrical components, except remote control devices, must be located or fixed so that they cannot fall into the bath. (IEC 60335-2-60)		P
	- the appliance should be supplied through a residual current device (RCD) with a rated tripping current not exceeding 30 mA (IEC 60335-2-60)		P
	Instruction giving details an how to follow the wiring rules. (IEC 60335-2-60)		P
	Instructions ensuring that the installation is in the correct zone and that equipotential bonding is carried out. (IEC 60335-2-60)		P
	Instructions for installation how to fix the appliance (IEC 60335-2-60)		N/A
	Installation instructions for whirlpool spas stating that: (IEC 60335-2-60)		P
	- the floor has to be capable of supporting the expected load (IEC 60335-2-60)		P
	- an adequate drainage system has to be provided to deal with overflow water. (IEC 60335-2-60)		P
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		P
7.12.3	Insulation of the fixed wiring in contact with parts exceeding 50 K during clause 11; instructions stating that the fixed wiring must be protected		N/A
7.12.4	Instructions for built-in appliances:		N/A

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
	- dimensions of space		N/A
	- dimensions and position of supporting means		N/A
	- distances between parts and surrounding structure		N/A
	- dimensions of ventilation openings and arrangement		N/A
	- connection to supply mains and interconnection of separate components		N/A
	- necessity to allow disconnection of the appliance from the supply after installation by means of: (IEC 60335-1/A1)		N/A
	plug accessible after installation, or		N/A
	a switch in the fixed wiring in accordance with the wiring rules, unless		N/A
	a switch complying with 24.3 incorporated in the appliance		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	Instructions for heating appliances incorporating a non-self-resetting thermal cut-out reset by disconnection of the supply mains contain the substance of the following: CAUTION: In order to avoid a hazard due to inadvertent resetting of the thermal cut-out, this appliance must not be supplied through an external switching device, such as a timer, or connected to a circuit that is regularly switched on and off by the utility. (IEC 60335-1/A1)		P
7.12.7	Instructions for fixed appliances state how the appliance is to be fixed to its support. (IEC 60335-1/A1)		N/A
7.12.8	Instructions for appliances connected to the water mains contain: (IEC 60335-1/A1)		N/A
	- the maximum inlet water pressure, in pascals;	0,3MPa	P
	- the minimum inlet water pressure, in pascals, if this is necessary for the correct operation of the appliance.	0,2MPa	P
	Instructions for appliances connected to the water mains by detachable hose-sets state that the new hose-sets supplied with the appliance are to be used and that old hose-sets should not be reused. (IEC 60335-1/A1)		N/A
7.13	Instructions and other texts in an official language	English	P

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
7.14	Marking clearly legible and durable		P
7.15	Marking on a main part		P
	Marking clearly discernible from the outside, if necessary after removal of a cover		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		P
	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
8	**PROTECTION AGAINST ACCESS TO LIVE PARTS**		P
8.1	Adequate protection against accidental contact with live parts		P
8.1.1	Requirement applies for all positions, detachable parts removed		P
	Insertion or removal of lamps, protection against contact with live parts of the lamp cap		P
	Use of test probe B of IEC 61032: no contact with live parts		P
	Add NOTE 2 ”Without appreciable force” is considered to be a force not exceeding 1 N (IEC 60335-1/A2)		P
8.1.2	Use of test probe 13 of IEC 61032 through openings in class 0 appliances and class II appliances/ constructions: no contact with live parts		P
	Test probe 13 also applied through openings in earthed metal enclosures having a non-conductive coating: no contact with live parts		P
	Add NOTE 2 ”Without appreciable force” is considered to be a force not exceeding 1 N (IEC 60335-1/A2)		P
8.1.3	For appliances other than class II, use of test probe 41 of IEC 61032: no contact with live parts of visible glowing heating elements		N/A

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
	Add NOTE 2 ”Without appreciable force” is considered to be a force not exceeding 1 N (IEC 60335-1/A2)		N/A
8.1.4	Energized parts regarded as live parts (IEC 60335-2-60)		P
8.1.5	Live parts protected at least by basic insulation before installation or assembly:		N/A
	- built-in appliances		N/A
	- fixed appliances		N/A
	- appliances delivered in separate units		N/A
8.2	Class II appliances and constructions constructed so that there is adequate protection against accidental contact with basic insulation and metal parts separated from live parts by basic insulation only		P
	Only possible to touch parts separated from live parts by double or reinforced insulation		P
9	**STARTING OF MOTOR-OPERATED APPLIANCES**		N/A
	Requirements and tests are specified in part 2 when necessary		N/A
	This clause of Part 1 is not applicable (IEC 60335-2-60)		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)	N/A
	Test for an appliance with one or more rated voltage ranges. (IEC 60335-1/A2)		N/A
10.2	Current at normal operating temperature, rated voltage and normal operation not deviating from rated current by more than shown in table 2	(see appended table)	P
	Test for an appliance with one or more rated voltage ranges. (IEC 60335-1/A2)		P
11	**HEATING**		P
11.1	No excessive temperatures in normal use		P
11.2	Placing and mounting of appliance as described		P
11.3	Temperature rises, other than of windings, determined by thermocouples		P
	Temperature rises of windings determined by resistance method, unless		P
	the windings makes it difficult to make the necessary connections		P

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
11.4	Heating appliances operated under normal operation at 1,15 times rated power input .....:		N/A
11.5	Motor-operated appliances operated under normal operation at most unfavourable voltage between 0,94 and 1,06 times rated voltage.....:		N/A
11.6	Combined appliances operated under normal operation at most unfavourable voltage between 0.94 and 1.06 times rated voltage.....:	230Vx1,06=243,8V	P
11.7	Operation duration corresponding to the most unfavourable conditions of normal use		P
11.8	Temperature rises not exceeding values in table 3	(see appended tables)	P
	Temperature rise limit not applied to switches or controls tested in accordance with the conditions occurring in the appliance. (IEC 60335-1/A1)		N/A
	Protective devices do not operate		P
	Components in protective electronic circuits are allowed to operate if they are tested for the number of cycles of operation specified in 24.1.4 (IEC 60335-1/A1)		N/A
	Sealing compound does not flow out		P
	In appliaces incorating heating element the water temperature at the inlet of the bath or spa not exceed 50 °C (IEC 60335-2-60)		N/A
13	**LEAKAGE CURRENT AND ELECTRIC STRENGTH AT OPERATING TEMPERATURE**		P
13.1	Leakage current not excessive and electric strength adequate		P
	Heating appliances operated at 1,15 times rated power input.....:		N/A
	Motor-operated appliances and combined appliances supplied at 1,06 times rated voltage.....:	1,06X230V=243,8V	P
	Protective impedance and radio interference filters disconnected before carrying out the tests		N/A
13.2	Leakage current measured by means of the circuit described in figure 4 of IEC 60990		P
	Leakage current measurements	(see appended table)	P
13.3	Electric strength tests according to table 4 (IEC 60335-1/A1).	(see appended table)	P
	No breakdown during the tests		P
14	**TRANSIENT OVERVOLTAGES**		N/A

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
	Appliances withstand the transient overvoltages to which they may be subjected		N/A
	Clearances having a value less than specified in table 16 subjected to an impulse voltage test, the test voltage specified in table 6	(see appended table)	N/A
	No flashover during the test, unless of functional insulation		N/A
	In case of flashover of functional insulation, the appliance complies with clause 19 with the clearance short circuited		N/A
15	**MOISTURE RESISTANCE**		P
15.1	Enclosure provides the degree of moisture protection according to classification of the appliance		P
	Compliance checked as specified in 15.1.1, taking into account 15.1.2, followed by the electric strength test of 16.3		P
	No trace of water on insulation which can result in a reduction of clearances and creepage distances below values specified in clause 29		P
	Traces of water on insulation in components operating at safety extra-low voltage not exceeding 12 V are ignored (IEC 60335-2-60)		P
15.1.1	Appliances, other than IPX0, subjected to tests as specified in IEC 60529.....:	IPX5	P
	Water valves containing live parts and that are incorporated in external hoses for connection of an appliance to the water mains are subjected to the test specified for IPX7 appliances. (IEC 60335-1/A1)		N/A
15.1.2	Hand-held appliance turned continuously through the most unfavourable positions during the test		N/A
	Built-in appliances installed according to the instructions		N/A
	Appliances placed or used on the floor or table placed on a horizontal unperforated support		P
	Appliances normally fixed to a wall and appliances with pins for insertion into socket-outlets are mounted on a wooden board		N/A
	For IPX4 appliances, the horizontal centre line of the appliance is aligned with the pivot axis of the oscillating tube		N/A
	For IPX4 appliances, the movement of the tube is limited to two times 90º from the vertical for a period of 5 min (IEC 60335-1/A1)		N/A

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
	Wall-mounted appliances, take into account the distance to the floor stated in the instructions		N/A
	Appliances with type X attachment fitted with a flexible cord as described		N/A
	Detachable parts tested as specified		P
	Whirlpool bath and whirlpool spas are tested without side panels fitted unless they are integral part of the appliance (IEC 60335-2-60)		P
15.2	Spillage of liquid does not affect the electrical insulation		P
	Appliances with type X attachment fitted with a flexible cord as described		N/A
	Appliances incorporating an appliance inlet tested with or without an connector, whichever is most unfavourable		N/A
	Detachable parts removed		P
	Overfilling test with additional amount of water, over a period of 1 min (l).....:		P
	The appliance withstands the electric strength test of 16.3		P
	No trace of water on insulation that can result in a reduction of clearances and creepage distances below values specified in clause 29		P
15.3	Appliances proof against humid conditions		P
	Humidity test for 48 h in a humidity cabinet		P
	The appliance withstands the tests of clause 16		P
16	**LEAKAGE CURRENT AND ELECTRIC STRENGTH**		P
16.1	Leakage current not excessive and electric strength adequate		P
	Protective impedance disconnected from live parts before carrying out the tests		N/A
16.2	Single-phase appliances: test voltage 1,06 times rated voltage .....:		P
	Three-phase appliances: test voltage 1,06 times rated voltage divided by √3.....:		N/A
	Leakage current measurements	(see appended table)	P
16.3	Electric strength tests according to table 7	(see appended table)	P
	No breakdown during the tests		P
17	**OVERLOAD PROTECTION OF TRANSFORMERS AND ASSOCIATED CIRCUITS**		P

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
	No excessive temperatures in transformer or associated circuits in event of short-circuits likely to occur in normal use		P
	Appliance supplied with 1,06 or 0,94 times rated voltage and the most unfavourable short-circuit or overload likely to occur in normal use applied .....:		P
	Temperature rise of insulation of the conductors of safety extra-low voltage circuits not exceeding the relevant value specified in table 3 by more than 15 K		P
	Temperature of the winding not exceeding the value specified in table 8,		P
	however limits do not apply to fail-safe transformers complying with sub-clause 15.5 of IEC 61558-1		P
	Test repeated with chlorinator cells loaded so that the current is 95 % of the lowest current that cause a protective device to operate. (IEC60335-2-60:2002)		N/A
	Test continued until steady conditions are established (IEC60335-2-60:2002)		N/A
18	**ENDURANCE**		N/A
	This clause of Part 1 is not applicable (IEC 60335-2-60)		N/A
19	**ABNORMAL OPERATION**		P
19.1	The risk of fire or mechanical damage under abnormal or careless operation obviated		P
	Electronic circuits so designed and applied that a fault will not render the appliance unsafe		P
	Appliances incorporating contactors or relays are subjected to the test of 19.14 (IEC 60335-1/A2)		P
19.2	Test of appliance with heating elements with restricted heat dissipation; test voltage (V): power input of 0,85 times rated power input .....:	0,85x2590,9W=2202,2W; 207,8V	P
	Appliances in which water is circulated, bath or spa is filled and operated, after which it is switched off and the bath emptied (IE C60335-2-60)		P
	Heating elements are then switched on (IEC 60335-2-60)		P
	The pump being operated or at rest whichever more unfavourable (IEC 60335-2-60)		P
	Appliances in which air is circulated, air inlets and outlets are blocked (IEC 60335-2-60)		P
	Heating elements are then switched on (IEC 60335-2-60)		P

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
19.3	Test of 19.2 repeated; test voltage (V): power input of 1,24 times rated power input.....:	1,24x3256,6W=4038,2W; 251,3V	P
19.4	Test conditions as in cl. 11, any control limiting the temperature during tests of cl. 11 short-circuited		P
19.5	Test of 19.4 repeated on Class 0I and I appliances with tubular sheathed or embedded heating elements. No short-circuiting, but one end of the element connected to the elements sheath		P
	The test repeated with reversed polarity and the other end of the heating element connected to the sheath		P
	The test is not carried out on appliances intended to be permanently connected to fixed wiring and on appliances where an all-pole disconnection occurs during the test of 19.4		P
19.6	Appliances with PTC heating elements tested at rated voltage, establishing steady conditions		N/A
	The working voltage of the PTC heating element is increased by 5% and the appliance is operated until steady conditions are re-established. The voltage is then increased in similar steps until 1,5 times working voltage or until the PTC heating element ruptures		N/A
19.7	Stalling test by locking the rotor if the locked rotor torque is smaller than the full load torque or locking moving parts of other appliances		P
	Locked rotor, motor capacitors open-circuited or short-circuited, if required		P
	Locked rotor, capacitors open-circuited one at a time		P
	Test repeated with capacitors short-circuited one at a time, if required		P
	Appliances with timer or programmer supplied with rated voltage for each of the tests, for a period equal to the maximum period allowed		P
	Other appliances supplied with rated voltage for a period as specified		N/A
	Winding temperatures not exceeding values specified in table 8	(see appended table)	P
	The test is carried out with the bath or spa filled as specified for normal operation. (IEC 60335-2-60)		P
19.8	Three-phase motors operated at rated voltage with one phase disconnected		N/A
19.9	Running overload test on appliances incorporating motors intended to be remotely or automatically controlled or liable to be operated continuously		N/A

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
	Winding temperatures not exceeding values as specified	(see appended table)	P
19.10	Series motor operated at 1,3 times rated voltage for 1 min.....:		N/A
	During the test, parts not being ejected from the appliance		N/A
19.11	Electronic circuits, compliance checked by evaluation of the fault conditions specified in 19.11.2 for all circuits or parts of circuits, unless they comply with the conditions specified in 19.11.1		P
	Protective electronic circuit are subjected to the tests of 19.11.3 and 19.11.4 (IEC 60335-1/A1)		N/A
	Appliances having a switch with an off position obtained by electronic disconnection, or a switch that can place the appliance in a stand-by mode, are subjected to the tests of 19.11.4 (IEC 60335-1/A1)		P
	Appliances having a switch with an off position obtained by electronic disconnection, or a switch placing the appliance in a stand-by mode, subjected to the tests of 19.11.4 :(IEC 60335-1/A2)		N/A
	Appliances incorporating an electronic circuit that relies upon a programmable component to function correctly are subjected to the test of 19.11.4.8, unless:(IEC 60335-1/A2)		N/A
	-restarting at any point in the operating cycle after interruption of operation due to a supply voltage dip will not result in a hazard. (IEC 60335-1/A2)		N/A
	- the test is carried out after removal of all batteries and other components intended to maintain the programmable component supply voltage during mains supply voltage dips, interruptions and variations. (IEC 60335-1/A2)		N/A
19.11.1	Before applying the fault conditions a) to f) in 19.11.2, it is checked if circuits or parts of circuit meet both of the following conditions:		P
	- the electronic circuit is a low-power circuit, that is, the maximum power at low-power points does not exceed 15 W according to the tests specified		P
	- the protection against electric shock, fire hazard, mechanical hazard or dangerous malfunction in other parts of the appliance does not rely on the correct functioning of the electronic circuit		N/A
19.11.2	Fault conditions applied one at a time, the appliance operated under conditions specified in cl. 11, but supplied at rated voltage, the duration of the tests as specified:		P
	a) short circuit of functional insulation if clearances or creepage distances are less than the values specified in 29		P

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
	b) open circuit at the terminals of any component		P
	c) short circuit of capacitors, unless they comply with IEC 60384-14		P
	d) short circuit of any two terminals of an electronic component, other than integrated circuits. This fault condition is not applied between the two circuits of an optocoupler		P
	e) failure of triacs in the diode mode		P
	f) failure of an integrated circuit		P
	g) failure of an electronic power switching device in a partial turn-on mode with loss of gate (base) control. During this test, winding temperatures shall not exceed the values given in 19.7. (IEC 60335-1/A2)		P
19.11.3	If the appliance incorporates a protective electronic circuit which operates to ensure compliance with clause 19, the relevant test is repeated with a single fault simulated, as indicated in a) to f) of 19.11.2		N/A
	During and after each test the following is checked:		N/A
	- the temperature rise of the windings do not exceed the values specified in table 8		N/A
	- the appliance complies with the conditions specified in 19.13		N/A
	- any current flowing through protective impedance not exceeding the limits specified in 8.1.4		N/A
	If a conductor of a printed board becomes open-circuited, the appliance is considered to have withstood the particular test, provided all three of the following conditions are met:		N/A
	- the material of the printed circuit board withstands the burning test of annex E		N/A
	- any loosened conductor does not reduce the clearances or creepage distances between live parts and accessible metal parts below the values specified in cl. 29		N/A
	- the appliance withstands the tests of 19.11.2 with open-circuited conductor bridged		N/A
19.11.4	Appliances having a switch with an off position obtained by electronic disconnection, or a switch that can be placed in the stand-by mode, are subjected to the tests of 19.11.4.1 to 19.11.4.7. The tests are carried out with the appliance supplied at rated voltage, the switch being set in the off position or in the stand-by mode. (IEC 60335-1/A1)		P

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
	Appliances incorporating a protective electronic circuit are subjected to the tests of 19.11.4.1 to 19.11.4.7. The tests are carried out after the protective electronic circuit has operated during the relevant tests of Clause 19 except 19.2, 19.6 and 19.11.3 (IEC 60335-1/A1)		N/A
	Appliances that are operated for 30 s or 5 min during the test of 19.7 not subjected to the tests for electromagnetic phenomena (IEC 60335-1/A1)		N/A
	Surge arresters disconnected, unless they incorporate spark gaps (IEC 60335-1/A1)		N/A
	Appliances with a device with an off position obtaining by electronic disconnection or that can be placed in a stand-by mode, are subjected to the tests of clause 19.11/4.1 to 19.11.4 7 (IEC 60335-1, A1) (IEC 60335-1/A2)		N/A
19.11.4.1	The appliance is subjected to electrostatic discharges in accordance with IEC 61000-4-2, test level 4 being applicable. Ten discharges having a positive polarity and ten discharges having a negative polarity are applied at each preselected point (IEC 60335-1/A1)		P
19.11.4.2	The appliance is subjected to radiated fields in accordance with IEC 61000-4-3, test level 3 being applicable (IEC 60335-1/A1)		P
19.11.4.3	The appliance is subjected to fast transient bursts in accordance with IEC 61000-4-4 (IEC 60335-1/A1)		P
19.11.4.4	The power supply terminals of the appliance are subjected to voltage surges in accordance with IEC 61000-4-5 (IEC 60335-1/A1)		P
	Earthed heating elements in class I appliances are disconnected (IEC 60335-1/A1)		P
	Test repeated at a level that is 95 % of the flashover voltage (IEC 60335-1/A1)		P
19.11.4.5	The appliance is subjected to injected currents in accordance with IEC 61000-4-6 (IEC 60335-1/A1)		P
19.11.4.6	The appliance is subjected to the values specified in Table 1 and Table 2 of IEC 61000-4-11, test level Class 3. (IEC 60335-1/A2)		P
19.11.4.7	The appliance is subjected to mains signals in accordance with IEC 61000-4-13 (IEC 60335-1/A1)		P
19.11.4.8	The appliance is supplied at rated voltage and operated under normal operation. (IEC 60335-1/A2)		P

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
	- after approximately 60 s, the power supply voltage is reduced to a level such that the appliance ceases to respond to user inputs or parts cease to operate, whichever occurs first. Record the value of supply voltage. (IEC 60335-1/A2)		P
	-the voltage is then reduced to a value of approximately 10 %. Holding at this value for approximately 60 s and then increased to rated voltage. The rate is approximately 10 V/s. (IEC 60335-1/A2)		P
	The appliance shall continue to either operate normally or a manual operation shall be required to restart it.(IEC 60335-1/A2)		P
19.12	If the safety of the appliance for any of the fault conditions specified in 19.11.2 depends on the operation of a miniature fuse-link complying with IEC 60127, the test is repeated, measuring the current flowing through the fuse-link; measured current (A); rated current of the fuse-link (A) .....:		N/A
19.13	During the tests the appliance does not emit flames, molten metal, poisonous or ignitable gas in hazardous amounts		P
	Temperature rises not exceeding the values shown in table 9	(see appended table)	P
	Compliance with cl. 8 is impaired (IEC 60335-1/A2)		P
	Enclosures not deformed to such an extent that compliance with cl. 8 is impaired		P
	If the appliance can still be operated it complies with 20.2		P
	Insulation, other than of class III appliance, withstand the electric strength test of 16.3, the test voltage specified in table 4:		P
	- basic insulation .....:	1000V	P
	- supplementary insulation.....:		N/A
	- reinforced insulation .....:	3000V	P
	- functional insulation, the test voltage is twice the working voltage. (IEC 60335-1/A2)		N/A
	The appliance does not undergo a dangerous malfunction and there is no failure of the protective electronic circuits if the appliance is still operable (IEC 60335-1/A1)		N/A
	Appliance tested with an electronic switch in off position, or in stand-by mode, does not become operational (IEC 60335-1/A1)		P
	Appliances tested with an electronic switch in the off position, or in the stand-by mode, shall: (IEC 60335-1/A2)		P
	- not become operational, or		P

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
	- if they become operational, not result in a dangerous malfunction during or after the tests of 19.11.4		N/A
	The temperature at the inlet of whirlpool bath that have provision for wather heating and whirlpool spas not exceed 55 °C when measured in accordance with clause 11. (IEC 60335-2-60)	40°C	P
19.14	Any contactor or relay contact that operates under the conditions of Clause 11 is short-circuited. (IEC 60335-1/A2)		P
	Note: If a relay or contactor with more than one contact is used, all contacts are short-circuited at the same time. (IEC 60335-1/A2)		N/A
20	**STABILITY AND MECHANICAL HAZARDS**		P
20.1	Adequate stability		P
	Tilting test through an angle of 10° (appliance placed on an inclined plane/horizontal plane); appliance does not overturn		P
	Tilting test repeated on appliances with heating elements, angle of inclination increased to 15°		P
	Possible heating test in overturned position; temperature rise does not exceed values shown in table 9		N/A
20.2	Moving parts adequately arranged or enclosed as to provide protection against personal injury		P
	Protective enclosures, guards and similar parts are non-detachable		P
	Adequate mechanical strength and fixing of protective enclosures		P
	Self-resetting thermal cut-outs and overcurrent protective devices not causing a hazard, by unexpected reclosure		P
	Not possible to touch dangerous moving parts with test probe		P
21	**MECHANICAL STRENGTH**		P
21.1	Appliance has adequate mechanical strength and is constructed as to withstand rough handling		P
	No damage after three blows applied to various parts of the enclosure, impact energy 0,5 ± 0,04 J		P
	If necessary, supplementary or reinforced insulation subjected to the electric strength test of 16.3		N/A
	If necessary, repetition of groups of three blows on a new sample		N/A

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
	Whirlpool spas not intended for indoor use only, subjected to the impact test. (IEC 60335-2-60)		P
	The appliance has been mantained at a temperature of -10 °C for 24 h. (IEC 60335-2-60)		P
	If the appliance is too large for the conditioning room, parts of the appliance are tested separately. (IEC 60335-2-60)		P
	The impact test is carried out immediately after the conditionig without reassembly. (IEC 60335-2-60)		P
	For water containers that provide protection against access to live parts, the value of the impact energy is 1 J.		P
21.2	Accessible parts of solid insulation have sufficient strength to prevent penetration by sharp implements (IEC 60335-1/A1)		P
	Test as specified, unless		N/A
	thickness of at least 1 mm for supplementary insulation and at least 2 mm for reinforced insulation		P
22	**CONSTRUCTION**		P
22.1	Appliance marked with the first numeral of the IP system, relevant requirements of IEC 60529 are fulfilled		N/A
22.2	Stationary appliance: means to provide all-pole disconnection from the supply provided, the following means being available:		P
	- a supply cord fitted with a plug		N/A
	- a switch complying with 24.3		N/A
	- a statement in the instruction sheet that a disconnection incorporated in the fixed wiring is to be provided	Request provided a RCD device	P
	- an appliance inlet		N/A
	Single-pole switches and single-pole protective devices that disconnect heating elements from the supply mains in single-phase, permanently connected class 0I appliances and class I appliances shall be connected to the phase conductor. (IEC 60335-1/A2)		P
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 50 N 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

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
	Each pin subjected to a torque of 0,4 Nm; the pins are not rotating unless rotating does not impair compliance with the standard		N/A
22.4	Appliance for heating liquids and appliance causing undue vibration not provided with pins for insertion into socket-outlets		P
22.5	No risk of electric shock when touching the pins of the plug		N/A
22.6	Electrical insulation not affected by condensing water or leaking liquid		P
	Electrical insulation of Class II appliances not affected in case of a hose rupture or seal leak		P
22.7	Adequate safeguards against the risk of excessive pressure in appliances provided with 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		N/A
22.9	Insulation, internal wiring, windings, commutators and slip rings not exposed to oil, grease or similar substances		P
	Adequate insulating properties of oil or grease to which insulation is exposed		N/A
22.10	Voltage-mantained non-self-resetting thermal cut-outs is not reset by an automatic switching device incorporated in the appliance (IEC 60335-1/A1)		N/A
	Non-self-resetting thermal motor protectors have a trip-free action unless they are voltage mantained (IEC 60335-1/A1)		N/A
	Location or protection of reset buttons of non-self-resetting controls is so 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
	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	No these parts	N/A
	Fixing in wrong position of handles, knobs etc. indicating position of switches or similar components not possible		N/A

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
	Axial force 15 N applied to parts, the shape being so that an axial pull is unlikely to be applied	The film keystoke	N/A
	Axial force 30 N applied to parts, the shape being so that an axial pull is likely to be applied		N/A
22.13	Unlikely that handles, when gripped as in normal use, make the operators hand touch parts having a temperature rise exceeding the value specified for handles which are held for short periods only		N/A
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 etc., liable 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, no undue wear of contacts		N/A
	Cord reel tested with 6000 operations, as specified		N/A
	Electric strength test of 16.3, voltage of 1000 V applied		N/A
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 under normal conditions of use		P
22.19	Driving belts not used as electrical insulation	No driving belts	N/A
22.20	Direct contact between live parts and thermal insulation effectively prevented, unless material used is non-corrosive, non-hygroscopic and non-combustible		N/A
	Compliance is checked by inspection and, if necessary, by appropriate test		N/A
22.21	This requirement does not apply to magnesium oxide and mineral ceramic fibres used for the electrical insulation of heating elements. (IEC 60335-1/A2)		P
22.22	Appliances not containing asbestos		P
22.23	Oils containing polychlorinated biphenyl (PCB) not used		P
22.24	Bare heating elements 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 cannot come into contact with accessible metal parts		N/A

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
22.26	The insulation between parts operating at safety extra-low voltage and other live parts complies with the requirements for double or reinforced insulation		P
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		N/A
	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	Clearances and creepage distances over supplementary and reinforced insulation not reduced below values specified in clause 29 as a result of wear		P
	Clearances and creepage distances between live parts and accessible parts not reduced below values for supplementary insulati0on, if wires, screws etc. become loose		P
22.32	Supplementary and reinforced insulation designed or protected against deposition of dirt or dust		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 material or beads alone not used as supplementary or reinforced insulation		N/A
	Oxygen bomb test at 70 °C for 96 h and 16 h at room temperature		N/A
	Insulating material in which heating conductors are embedded is considered to be basic insulation and not reinforced insulation (IEC 60335-1/A2)		N/A
22.33	Conductive liquids that are or may become accessible in normal use are not in direct contact with live parts		P
	Electrodes not used for heating liquids		P

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
	For class II constructions, conductive liquids that are or may become accessible in normal use, not in direct contact with basic or reinforced insulation		P
	For class II constructions, conductive liquids which are in contact with live parts, not in direct contact with reinforced insulation		N/A
	Conductive liquid in direct contact with live parts supplied at safety extra low voltage not exceeding 12 V. (IEC 60335-2-60)		N/A
	Components accessible to the user in the bath or spa supplied at safety extra-low voltage not exceeding 12 V (IEC 60335-2-60)		P
22.34	Shafts of operating knobs, handles, levers etc. not live, unless the shaft is not accessible when the part is removed		P
22.35	Handles, levers and knobs, held or actuated in normal use, not becoming live in the event of an basic insulation fault (IEC 60335-1/A2)	The film keystoke belong to class III constructions	N/A
	Such parts being of metal, and their shafts or fixings are likely to become live in the event of an basic insulation fault, they are either adequately covered by insulation material, or their accessible parts are separated from their shafts or fixings by supplementary insulation (IEC 60335-1/A2)		N/A
	This requirement does not apply to handles, levers and knobs on stationary appliances other than those of electrical components, provided they are either reliably connected to an earthing terminal or earthing contact, or separated from live parts by earthed metal		N/A
22.36	Handles continuously held in the hand in normal use are so constructed that when gripped as in normal use, the operators hand is not likely to touch metal parts, unless they are separated from live parts by double or reinforced insulation	class III constructions	N/A
22.37	Capacitors in Class II appliances not connected to accessible metal parts, unless complying with 22.42		N/A
	Metal casings of capacitors in Class II appliances separated from accessible metal parts by supplementary insulation, unless complying with 22.42		N/A
22.38	Capacitors not connected between the contacts of a thermal cut-out		P
22.39	Lamp holders used only for the connection of lamps		P

IEC 60335-2-60 and/or EN 60335-2-60			
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		N/A
	The appliance can operate continuously, automatically or remotely without giving rise to a hazard, appliances for remote operation shall be fitted with a switch for stopping the operation of the appliance. The actuating member of this switch shall be easily visible and accessible (IEC 60335-1/A2)		N/A
22.41	No components, other than lamps, containing mercury	No these components	N/A
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
22.43	Appliances adjustable for different voltages, accidental changing of the setting of the voltage unlikely to occur		N/A
22.44	Appliances shall not have an enclosure that is shaped or decorated like a toy (IEC 60335-1/A2)		P
22.45	When air is used as reinforced insulation, clearances not reduced below the values specified in 29.1.4 due to deformation as a result of an external force applied to the enclosure		N/A
22.46	Software used in protective electronic circuits is .....: (IEC 60335-1/A1)	☐ Class B ☐ Class C	N/A
22.47	Applliances intended to be connected to the water mains withstand the water pressure in normal use (IEC 60335-1/A1)	0,6MPa	P
22.48	Applliances intended to be connected to the water mains constructed to prevent backsiphonage of non-potable water into the water mains (IEC 60335-1/A1)		N/A
	Compliance checked by the relevant tests of IEC 61770 (IEC 60335-1/A1)		N/A
22.49	For remote operation, the duration of operation shall be operated without giving rise to a hazard: (IEC 60335-1/A2)		N/A
	- set before the appliance is started		N/A
	- the appliance switches off automatically at the end of a cycle		N/A

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
	- it can operate continuously		N/A
22.50	Controls incorporated in the appliance shall take priority over controls actuated by remote operation (IEC 60335-1/A2)		N/A
22.51	A control on the appliance shall be manually adjusted to the setting for remote operation before the appliance can be operated in this mode. (IEC 60335-1/A2)		N/A
	There shall be a visual indication on the appliance showing that the appliance is adjusted for remote operation, or (IEC 60335-1/A2)		N/A
	The manual setting and the visual indication of the remote mode are not necessary on appliances if it can operate continuously or automatically or remotely without giving rise to a hazard. (IEC 60335-1/A2)		N/A
22.52	Socket-outlets on appliances accessible to the user shall be in accordance with the socket-outlet system used in the country in which the appliance is sold. (IEC 60335-1/A2)		N/A
22.101	Appliances in which air is circulated shall be constructed so that water cannot penetrate into the motor and come into contact with live parts or basic insulation (IEC 60335-2-60)		P
22.102	Whirlpool baths constructed that the quantity of water which remains not exceed 0,5 l or 0,2% of the capacity (IEC 60335-2-60)		P
22.103	Whirlpool baths and whirlpool spas constructed that hair cannot be drawn into apertures (IEC 60335-2-60)		P
22.104	Portable appliances shall be constructed to prevent a hazard resulting from objects penetrating the bottom surface. (IEC 60335-2-60)		N/A
22.105	Whirlpool spas incorporating a water filtration system in order that the required level of water purity can be achieved. (IEC 60335-2-60)		P

23	**INTERNAL WIRING**		P
23.1	Wireways smooth and free from sharp edges		P
	Wires protected against contact with burrs, cooling fins etc.		P
	Wire holes in metal well rounded or provided with bushings		N/A
	Wiring effectively prevented from coming into contact with moving parts		P

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
23.2	Beads etc. on live wires cannot change their position, and are not resting on sharp edges or corners		N/A
	Beads inside flexible metal conduits contained within an insulating sleeve		N/A
23.3	Electrical connections and internal conductors movable relatively to each other not exposed to undue stress		P
	Flexible metallic tubes not causing damage to insulation of conductors		N/A
	Open-coil springs not used		N/A
	Adequate insulating lining provided inside a coiled spring, the turns of which touch one another		N/A
	No damage after 10 000 flexings for conductors flexed during normal use or 100 flexings for conductors flexed during user maintenance		N/A
	Electric strength test, 1000 V between live parts and accessible metal parts		N/A
23.4	Bare internal wiring sufficiently rigid and fixed		N/A
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
23.6	Sleeving used as supplementary insulation on internal wiring retained in position by positive means		P
23.7	The colour combination green/yellow used only for earthing conductors		P
23.8	Aluminium wires not used for internal wiring		P
23.9	No lead-tin soldering of stranded conductors where they are subject to contact pressure, unless		P
	clamping means so constructed that there is no risk of bad contact due to cold flow of the solder		N/A
23.10	Insulation and sheath of internal wiring in external hoses for the connection to the water mains at least equivalent to light polyvinyl chloride sheathed flexible cord (60227 IEC 52) (IEC 60335-1/A1)		N/A
24	**COMPONENTS**		P
24.1	Components comply with safety requirements in relevant IEC standards		P
	List of components	(see appended table)	P

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
	Components not tested and found to comply with relevant IEC standard for the number of cycles specified are tested in accordance with 24.1.1 to 24.1.9 (IEC 60335-1/A2)		P
	Components not tested and found to comply with relevant IEC standard, components not marked or not used in accordance with its marking, tested under the conditions occurring in the appliance		P
	Lampholders and starterholders that have not been previously tested and found to comply with the relevant IEC standard are tested as a part of the appliance and shall additionally comply with the gauging and interchangeability requirements of the relevant IEC standard under the conditions occurring in the appliance. (IEC 60335-1/A2)		N/A
24.1.1	Capacitors likely to be permanently subjected to the supply voltage and used for radio interference suppression or for voltage dividing, complying with IEC 60384-14, or		N/A
	tested according to annex F		N/A
24.1.2	Safety isolating transformers complying with IEC 61558-2-6, or		P
	tested according to annex G		N/A
24.1.3	Switches complying with IEC 61058-1, the number of cycles of operation being at least 10 000, or		P
	tested according to annex H		N/A
24.1.4	Automatic controls complying with IEC 60730-1 with relevant part 2. The number of cycles of operation being:		P
	- thermostats: 10 000		P
	- temperature limiters: 1 000		N/A
	- self-resetting thermal cut-outs: 300		P
	- voltage mantained non-self-resetting thermal cut-outs (60335-1/A1): 1000		N/A
	- other non-self-resetting thermal cut-outs 30		P
	- timers: 3 000		N/A
	- energy regulators: 10 000		N/A
	Thermal motor protectors tested in combination with their motor under the conditions specified in Annex D (IEC 60335-1/A1)		P
	For water valves containing live parts and that are incorporated in external hoses for connection of an appliance to the water mains, degree of protection provided by enclosures declared for subclause 6.5.2 of IEC 60730-2-8 is IPX7 (IEC 60335-1/A1)		N/A
24.1.5	Appliance couplers complying with IEC 60320-1		N/A

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
	Interconnection couplers complying with IEC 60320-2-2 (IEC 60335-1/A1)		N/A
	However, appliances classified higher than IPX0, the appliance couplers complying with IEC 60320-2-3		N/A
24.1.6	Small lamp holders similar to E10 lampholders complying with IEC 60238, the requirements for E10 lampholders being applicable		N/A
24.1.7	If the remote operation of the appliance is via a telecommunication network, the telecommunication interface circuitry in the appliance shall comply with IEC 62151. (IEC 60335-1/A2)		N/A
24.1.8	Thermal links shall comply with IEC 60691, or (IEC 60335-1/A2)		N/A
	Thermal links are considered to be an intentionally weak part for the purposes of Clause 19. (IEC 60335-1/A2)		N/A
24.1.9	Relays, other than motor starting relays, are tested as part of the appliance. (IEC 60335-1/A2)		P
	However, they are also tested in accordance with Clause 17 of IEC 60730-1 under the maximum load conditions occurring in the appliance for at least the number of operations in 24.1.4 selected according to the relay function in the appliance. (IEC 60335-1/A2)		P
24.2	No switches or automatic controls in flexible cords		N/A
	No devices causing the protective device in the fixed wiring to operate in the event of a fault in the appliance		N/A
	No thermal cut-outs that can be reset by soldering		N/A
24.3	Switches intended for all-pole disconnection of stationary appliances are directly connected to the supply terminals and having a contact separation in all poles, providing full disconnection under overvoltage category III conditions	The RCD device	P
24.4	Plugs and socket-outlets for extra-low voltage circuits and heating elements, not interchangeable with plugs and socket-outlets listed in IEC 60083 or IEC 60906-1 or with connectors and appliance inlets complying with the standard sheets of IEC 60320-1		P
24.5	Capacitors in auxiliary windings of motors marked with their rated voltage and capacitance and used accordingly		P
	Voltage across capacitors in series with a motor winding does not exceed 1,1 times rated voltage, when the appliance is supplied at 1,1 times rated voltage under minimum load		P

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
24.6	Working voltage of motors connected to the supply mains and having basic insulation that is inadequate for the rated voltage of the appliance, not exceeding 42V.		N/A
	In addition, the motors are complying with the requirements of Annex I		N/A
24.7	Hose-sets for the connection to the water mains complying with IEC 61770 (IEC 60335-1/A1)		N/A
	Hose-sets supplied with the appliance (IEC 60335-1/A1)		N/A
24.101	Thermal cut-outs incorporated in appliances for compliance with 19.4 not self resetting		P
24.102	Class III appliances provided with a safety isolating transformer classiefied at least IPX4		N/A
25	**SUPPLY CONNECTION AND EXTERNAL FLEXIBLE CORDS**		P
25.1	Appliance not intended for permanent connection to fixed wiring, means for connection to the supply:		N/A
	- supply cord fitted with a plug		N/A
	- an appliance inlet having at least the same degree of protection against moisture as required for the appliance		N/A
	- pins for insertion into socket-outlets		N/A
	Class I appliances shall only be provided with means for permanent connection to fixed wiring (IEC 60335-2-60)		P
25.2	Appliance not provided with more than one means of connection to the supply mains		N/A
	Stationary appliance for multiple supply may be provided with more than one means of connection, provided electric strength test of 1250 V for 1 min between each means of connection causes no breakdown		N/A
25.3	Connection of supply conductors for appliance intended to be permanently connected to fixed wiring possible after the appliance has been fixed to its support		P
	Appliance provided with a set of terminals for the connection of cables or fixed wiring, cross-sectional areas specified in 26.6		P
	Appliance provided with a set of terminals allowing the connection of a flexible cord		N/A
	Appliance provided with a set of supply leads accommodated in a suitable compartment		N/A

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
	Appliance provided with a set of terminals and cable entries, conduit entries, knock-outs or glands, allowing connection of appropriate type of cable or conduit		N/A
25.4	Cable and conduit entries, rated current of appliance not exceeding 16 A, dimensions according to table 10		N/A
	Introduction of conduit or cable does not reduce clearances or creepage distances below values specified in 29		N/A
25.5	Method for assemble supply cord with the appliance:		N/A
	- type X attachment		N/A
	- type Y attachment		N/A
	- type Z attachment		N/A
	Type X attachment, other than those with a specially prepared cord, not used for flat twin tinsel cords		N/A
25.6	Plugs fitted with only one flexible cord		N/A
25.7	Supply cord shall be one of the following types: (IEC 60335-1/A2)		N/A
	- at least ordinary tough rubber sheathed cord (60245 IEC 53) (IEC 60335-1/A2)	The according instructions request	N/A
	- at least ordinary polychloroprene sheathed flexible cord [60245 IEC 57] (IEC 60335-1/A2)		N/A
	- at least cross-linked polyvinyl chloride sheathed cords [60245 IEC 87] (IEC 60335-1/A2)		N/A
	- Polyvinyl chloride sheathed, not be used to touch metal parts having a temperature rise exceeding 75 K during the test of Clause 11. Their properties shall be at least those of: (IEC 60335-1/A2)		N/A
	--light polyvinyl chloride sheathed cord (code designation 60227 IEC 52), for appliances having a mass not exceeding 3 kg or		N/A
	--ordinary polyvinyl chloride sheathed cord (code designation 60227 IEC 53), for other appliances		N/A
	-Heat resistant polyvinyl chloride sheathed, not be for type X attachment other than specially prepared cords. Their properties shall be at least those of: (IEC 60335-1/A2)		N/A
	--heat-resistant light polyvinyl chloride sheathed cord (code designation 60227 IEC 56), for appliances having a mass not exceeding 3 kg or		N/A
	--heat-resistant polyvinyl chloride sheathed cord (code designation 60227 IEC 57), for other appliances		N/A

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
25.8	Nominal cross-sectional area of supply cords according to table 11; rated current (A); cross-sectional area (mm²).....:	<25A 3x2,5 mm²	P
25.9	Supply cord not in contact with sharp points or edges		P
25.10	Green/yellow core for earthing purposes in Class I appliance		P
25.11	Conductors of supply cords not consolidated by lead-tin soldering where they are subject to contact pressure, unless		P
	clamping means so constructed that there is no risk of bad contacts due to cold flow of the solder		N/A
25.12	Moulding the cord to part of the enclosure does not damage the insulation of the supply cord		P
25.13	Inlet opening so shaped as to prevent damage to the supply cord		P
	Unless the enclosure at the inlet opening is of insulation material, a non-detachable lining or bushing complying with 29.3 for supplementary insulation provided		P
	If unsheathed supply cord, a similar additional bushing or lining is required, unless		N/A
	the appliance is class 0		N/A
25.14	Supply cords adequately protected against excessive flexing		N/A
	Flexing test:		N/A
	- applied force (N) .....:		N/A
	- number of flexings .....:		N/A
	The test does not result in:		N/A
	- short circuit between the conductors		N/A
	- breakage of more than 10% of the strands of any conductor		N/A
	- separation of the conductor from its terminal		N/A
	- loosening of any cord guard		N/A
	- damage, within the meaning of the standard, to the cord or the cord guard		N/A
	- broken strands piercing the insulation and becoming accessible		N/A
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

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
	Pull and torque test of supply cord, values shown in table 12: pull (N); torque (not on automatic cord reel) (Nm) .....:	Pull:100N 25times Torque:0,35Nm 1min	P
	Max. 2 mm displacement of the cord, and conductors not moved more than 1 mm in the terminals		P
	Creepage distances and clearances not reduced below values specified in 29.1		P
25.16	Cord anchorages for type X attachments constructed and located so that:		N/A
	- replacement of the cord is easily possible		N/A
	- it is clear how the relief from strain and the prevention of twisting are obtained		N/A
	- they are suitable for different types of cord		N/A
	- cord cannot touch the clamping screws of cord anchorage if these screws are accessible, unless separated from accessible metal parts by supplementary insulation		N/A
	- the cord is not clamped by a metal screw which bears directly on the cord		N/A
	- at least one part of the cord anchorage securely fixed to the appliance, unless part of a specially prepared cord		N/A
	- screws which have to be operated when replacing the cord do not fix any other component, if applicable		N/A
	- if labyrinths can be bypassed the test of 25.15 is nevertheless withstood		N/A
	- for Class 0, 0I and I appliances: they are of insulating material or are provided with an insulating lining, unless a failure of the insulation of the cord does not make accessible metal parts live		N/A
	- for Class II appliances: they are of insulating material, or if of metal, they are insulated from accessible metal parts by supplementary insulation		N/A
25.17	Adequate cord anchorages for type Y and Z attachment		N/A
25.18	Cord anchorages only accessible with the aid of a tool, or		P
	so constructed that the cord can only be fitted with the aid of a tool		P
25.19	Type X attachment, glands not used as cord anchorage in portable appliances		N/A
	Tying the cord into a knot or tying the cord with string not used		N/A
25.20	Conductors of the supply cord for type Y and Z attachment adequately additionally insulated		P

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
25.21	Space for supply cord for type X attachment or for connection of fixed wiring constructed to permit checking of conductors with respect to correct positioning and connection before fitting any cover, no risk of damage to the conductors when fitting the cover, no contact with accessible metal parts if a conductor becomes loose, etc.		N/A
	For portable appliances, the uninsulated end of a conductor prevented from any contact with accessible metal parts, unless the end of the cord is such that the conductors are unlikely to slip free		N/A
25.22	Appliance inlet:		N/A
	- live parts not accessible during insertion or removal		N/A
	- connector can be inserted without difficulty		N/A
	- the appliance is not supported by the connector		N/A
	- is not for cold conditions if temp. rise of external metal parts exceeds 75 K, unless the supply cord is not likely to touch such metal parts		N/A
25.23	Interconnection cords comply with the requirements for the supply cord, except as specified		N/A
	If necessary, electric strength test of 16.3		N/A
25.24	Interconnection cords not detachable without the aid of a tool if compliance with the standard is impaired when they are disconnected		P
25.25	Dimensions of pins compatible with the dimensions of the relevant socket-outlet. Dimensions of pins and engagement face in accordance with the relevant plug in IEC 60083		N/A
26	**TERMINALS FOR EXTERNAL CONDUCTORS**		P
26.1	Appliances provided with terminals or equally effective devices for connection of external conductors		P
	Terminals only accessible after removal of a non-detachable cover		P
	Earthing terminals accessible if a tool is required to make the connections and means are provided to clamp the wire independently from its connection (IEC 60335-1/A1)		N/A
26.2	Appliances with type X attachment and appliances for connection to fixed wiring provided with terminals in which connections are made by means of screws, nuts or similar devices, unless the connections are soldered		P
	Screws and nuts serve only to clamp supply conductors, except		P

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
	internal conductors, if so arranged that they are unlikely to be displaced when fitting the supply conductors		P
	If soldered connections used, the conductor so positioned or fixed that reliance is not placed on soldering alone		N/A
	Soldering alone used, barriers provided, clearances and creepage distances satisfactory if the conductor becomes free at the soldered joint		N/A
26.3	Terminals for type X attachment and for connection to fixed wiring so constructed that the conductor is clamped between metal surfaces with sufficient contact pressure and without damaging the conductor		N/A
	Terminals for type X attachment and those for connection to fixed wiring so fixed that when tightening or loosening the clamping means:		N/A
	- the terminal does not loosen		N/A
	- internal wiring is not subjected to stress		N/A
	- clearances and creepage distances are not reduced below the values in 29		N/A
	Compliance checked by inspection and by the test of subclause 9.6 of IEC 60999-1, the torque applied being equal to two-thirds of the torque specified. Nominal diameter of thread (mm); screw category; torque (Nm) (IEC 60335-1/A2) .....:		N/A
26.4	Terminals for type X attachment, except those with a specially prepared cord, and those for connection to fixed wiring, no special preparation of conductors required, and so constructed or placed that conductors prevented from slipping out		P
26.5	Terminals for type X attachment so located or shielded that if a wire of a stranded conductor escapes, no risk of accidental connection to other parts that result in a hazard		N/A
	Stranded conductor test, 8 mm insulation removed		N/A
	No contact between live parts and accessible metal parts and, for class II constructions, between live parts and metal parts separated from accessible metal parts by supplementary insulation only		N/A
26.6	Terminals for type X attachment and for connection to fixed wiring suitable for connection of conductors with required cross-sectional area according to table 13; rated current (A); nominal cross-sectional area (mm²) .....:	39,2A 6 mm²	P
	Terminals only suitable for a specially prepared cord		N/A
26.7	Terminals for type X attachment accessible after removal of a cover or part of the enclosure		N/A

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
26.8	Terminals for the connection to fixed wiring, including the earthing terminal, located close to each other		P
26.9	Terminals of the pillar type constructed and located as specified		P
26.10	Terminals with screw clamping and screwless terminals not used for flat twin tinsel cords, unless conductors ends fitted with a device suitable for screw terminals		N/A
	Pull test of 5 N to the connection		N/A
26.11	For type Y and Z attachment: soldered, welded, crimped and similar connections may be used		N/A
	For Class II appliances: the conductor so positioned or fixed that reliance is not placed on soldering, welding or crimping alone		N/A
	For Class II appliances: soldering, welding or crimping alone used, barriers provided, clearances and creepage distances satisfactory if the conductor becomes free		N/A
27	**PROVISION FOR EARTHING**		P
27.1	Accessible metal parts of Class 0I and I appliances, permanently and reliably connected to an earthing terminal or contact of the appliance inlet		P
	Earthing terminals not connected to neutral terminal		P
	Class 0, II and III appliance have no provision for earthing		N/A
	Safety extra-low voltage circuits not earthed, unless protective extra-low voltage circuits		P
27.2	Clamping means adequately secured against accidental loosening		P
	Terminals used for the connection of external equipotential bonding conductors allow connection of conductors of 2,5 to 6 mm², and		P
	do not provide earthing continuity between different parts of the appliance		P
	Conductors cannot be loosened without the aid of a tool		P
	Class I appliances provided with a terminal for the connection of external equipotential bonding conductors (IEC 60335-2-60)		P
27.3	For detachable parts, earth connection made and separated before the current-carrying connections (IEC 60335-1/A1)		N/A

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
	For appliances with supply cord, current-carrying conductors become taut before earthing conductor, if the cord slips out of the cord anchorage		N/A
27.4	No risk of corrosion resulting from contact between metal of earthing terminal and other metal		P
	Adequate resistance to corrosion of coated or uncoated parts providing earthing continuity, other than parts of a metal frame or enclosure		P
	Parts of steel providing earthing continuity provided at the essential areas with an electroplated coating, thickness at least 5 µm		P
	Adequate protection against rusting of parts of coated or uncoated steel, only intended to provide or transmit contact pressure		P
	In case of aluminium alloys precautions taken to avoid risk of corrosion		N/A
27.5	Low resistance of connection between earthing terminal and earthed metal parts		P
	This requirement does not apply to connections providing earthing continuity in the protective extra-low voltage circuit, provided that clearances of basic insulation are based on the rated voltage of the appliance		N/A
	Resistance not exceeding 0,1 Ω at the specified low-resistance test	0,02Ω	P
27.6	The printed conductors of printed circuit boards not used to provide earthing continuity in hand held appliances (IEC 60335-1/A2)		N/A
	They may be used in other appliances if at least two tracks are used with independent soldering points and the appliance complies with 27.5 for each circuit (IEC 60335-1/A2)		N/A
28	**SCREWS AND CONNECTIONS**		P
28.1	Fixings, electrical connections and connections providing earthing continuity withstand mechanical stresses		P
	Screws not of soft metal liable to creep, such as zinc or aluminium		P
	Diameter of screws of insulating material min. 3 mm		N/A
	Screws of insulating material not used for any electrical connection or connections providing earthing continuity	No screws of insulating material	N/A
	Screws used for electrical connections or connections providing earthing continuity screw into metal		P

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
	Screws not of insulating material if their replacement by a metal screw can impair supplementary or reinforced insulation		N/A
	Type X attachment, screws to be removed for replacement of supply cord or for user maintenance, not of insulating material if their replacement by a metal screw can impair basic insulation		N/A
	For screws and nuts; test as specified	(see appended table)	P
28.2	Electrical connections and connections providing earthing continuity constructed so that contact pressure not transmitted through insulating material liable to shrink or distort, unless shrinkage or distortion compensated		P
	This requirement does not apply to electrical connections in circuits carrying a current not exceeding 0,5 A		N/A
28.3	Space-threaded (sheet metal) screws only used for electrical connections if they clamp the parts together		N/A
	Thread-cutting (self-tapping) screws and thread rolling screws shall only be used for electrical connections if they generate a full form standard machine screw thread. (IEC 60335-1/A2)		N/A
	However, such screws not used if they are likely to be operated by the user or installer (IEC 60335-1/A2)		N/A
	Thread-cutting, thread rolling and space-threaded screws may be used in connections providing earthing continuity provided it is not necessary to disturb the connection of normal use, user maintenance, when replacing a supply cord having a type X attachment and during installation. (IEC 60335-1/A2)		N/A
	At least two screws must be used for each connection providing earthing continuity unless: (IEC 60335-1/A2)		N/A
	The screw forms a thread having a length of at least half the diameter of the screw. (IEC 60335-1/A2)		N/A
28.4	Screws and nuts that make mechanical connection secured against loosening if they also make electrical connections or connections providing earthing continuity		P
	Rivets for electrical connections or connections providing earthing continuity secured against loosening if subjected to torsion		P

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
29	**CLEARANCES, CREEPAGE DISTANCES AND SOLID INSULATION**		P
	Clearances, creepage distances and solid insulation withstand electrical stress		P
	For coatings used on printed circuit boards to protect the microenvironment (Type 1 coating) or to provide basic insulation (Type 2 coating), Annex J applies. (IEC 60335-1/A2)		N/A
	The microenvironment is pollution degree 1 under Type 1 coating. (IEC 60335-1/A2)		N/A
	There are no clearance or creepage distance requirements under Type 2 coating. (IEC 60335-1/A2)		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		P
	The values specified may be smaller for basic insulation and functional insulation if the clearance meets the impulse voltage test of clause 14		N/A
	Appliances are in overvoltage category II		P
	Clearances less than specified in table 16 not allowed for basic insulation of class 0 and class 0I appliances,		N/A
	or if pollution degree 3 is applicable		P
	Compliance is checked by inspection and measurements as specified		P
29.1.1	Clearances of basic insulation withstand the overvoltages, taking into account the rated impulse voltage and the impulse voltage test of Clause 14 (IEC 60335-1/A2)		P
	Clearance at the terminals of tubular sheathed heating elements may be reduced to 1mm if the microenvironment is pollution degree 1		N/A
	Lacquered conductors of windings assumed to be bare conductors		P
29.1.2	Clearances of supplementary insulation not less than those specified for basic insulation in table 16		P
29.1.3	Clearances of reinforced insulation not less than those specified for basic insulation in table 16, but using the next higher step for rated impulse voltage		P
29.1.4	For functional insulation, the values of table 16 are applicable, unless		P
	the appliance complies with clause 19 with the functional insulation short-circuited		P
	Clearances at crossover points of lacquered conductors not measured		P

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
	Clearance between surfaces of PTC heating elements may be reduced to 1 mm		N/A
	Lacquered conductors of windings assumed to be bare conductors		P
29.1.5	Appliances having higher working voltage than rated voltage, the voltage used for determining clearances from table 16 is the sum of the rated impulse voltage and the difference between the peak value of the working voltage and the peak value of the rated voltage		N/A
	If the secondary winding of a step-down transformer is earthed, or if there is an earthed screen between the primary and secondary windings, clearances of basic insulation on the secondary side not less than those specified in table 16, but using the next lower step for rated impulse voltage		N/A
	Circuits supplied with a voltage lower than rated voltage, clearances of functional insulation based on the working voltage used as the rated voltage in table 15		P
29.2	Creepage distances not less than those appropriate for the working voltage, taking into account the material group and the pollution degree		P
	Pollution degree 3 applies, unless (IEC 60335-2-60)		P
	Pollution degree 2		N/A
	Pollution degree 1		N/A
	Compliance is checked by inspection and measurements as specified		P
29.2.1	Creepage distances of basic insulation not less than specified in table 17		P
	For pollution degree 1, 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 as specified for basic insulation in table 17		P
29.2.3	Creepage distances of reinforced insulation at least double as specified for basic insulation in table 17		P
29.2.4	Creepage distances of functional insulation not less than specified in table 18		P
	Creepage distances may be reduced if the appliance complies with clause 19 with the functional insulation short-circuited		P

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
29.3	Supplementary insulation and reinforced insulation have adequate thickness or a sufficient number of layers to withstand electrical stresses during the use of the appliance (IEC 60335-1/A1):		P
29.3.1	solid insulation having a minimum thickness of 1 mm for supplementary insulation,		P
	and 2 mm for reinforced insulation, or		P
29.3.2	supplementary insulation, other than mica or similar scaly material, consists of at least two layers, each of the layers withstands the electric strength test of 16.3, and		N/A
	reinforced insulation, other than mica or similar scaly material, consists of at least three layers, any two layers together withstand the electric strength test of 16.3, or		N/A
29.3.3	if the insulation, after conditioning as specified (IEC 60068-2-2), withstands the electric strength test of 16.3		N/A
30	**RESISTANCE TO HEAT AND FIRE**		P
30.1	External parts of non-metallic material,		P
	parts supporting live parts, and		P
	thermoplastic material providing supplementary or reinforced insulation,		P
	sufficiently resistant to heat		P
	Ball-pressure test according to IEC 60695-10-2		P
	External parts: at 40 °C plus the maximum temperature rise determined during the test of clause 11, or at 75 °C, whichever is the higher; temperature (°C) ..... :		N/A
	Parts supporting live parts: at 40°C plus the maximum temperature rise determined during the test of clause 11, or at 125 °C, whichever is the higher; temperature (°C)..... :		P
	Parts of thermoplastic material providing supplementary or reinforced insulation, 25 °C plus the maximum temperature rise determined during clause 19, if higher; temperature (°C) ..... :		N/A
30.2	Relevant parts of non-metallic material adequately resistant to ignition and spread of fire (IEC 60335-1/A2)		P
	This requirement does not apply to decorative trims, knobs and other parts unlikely to be ignited or to propagate flames that originate inside the appliance (IEC 60335-1/A2)		N/A

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
	Compliance checked by the test of 30.2.1. In addition:		P
	- attended appliances, 30.2.2 applies		N/A
	- unattended appliances, 30.2.3 applies		P
	Appliances for remote operation are considered to be unattended and consequently so they need comply with the test of 30.2.3. (IEC 60335-1/A2)		N/A
30.2.1	Glow-wire test of IEC 60695-2-11 at 550 °C, unless		P
	the material is classified at least HB40 according to IEC 60695-11-10		N/A
	Parts for which the glow-wire test cannot be carried out meet the requirements in ISO9772 for material classified HBF (IEC 60335-1/A2)		N/A
30.2.2	Appliances operated while attended, parts of insulating material supporting current-carrying connections and parts within a distance of 3 mm subjected to the glow-wire test of IEC 60695-2-11 at a temperature of:		N/A
	- 750°C, for connections carrying a current exceeding 0,5 A during normal operation		N/A
	- 650°C, for other connections		N/A
	Test not applicable to conditions as specified (IEC 60335-2-60)		N/A
30.2.3	Appliances operated while unattended, tested as specified in 30.2.3.1 and 30.2.3.2		P
	Test not applicable to conditions as specified		P
30.2.3.1	Parts of non-metallic material supporting connections carrying a current exceeding 0.2A during normal operation, and (IEC 60335-1/A2)		P
	parts of non-metallic material within a distance of 3mm, and (IEC 60335-1/A2)		P
	Parts within 3mm but it is shielded from the connection by a different material, then the interposed shielding material in place but not directly to the shielded material (IEC 60335-1/A2)		N/A
	having a glow-wire flammability index of at least 850°C according to IEC 60695-2-11. (IEC 60335-1/A2)		P
	However, the test is not carried out on such parts: (IEC 60335-1/A2)		N/A
	- the material classified as having a glow-wire flammability index of at least 850 °C according to IEC 60695-2-12 and the thickness comply with the requirements, or		N/A
	- small parts, comply with the needle-flame test of Annex E or		N/A

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
	- small parts, classified as V-0 or V-1 according to IEC 60695-11-10 and no thicker than the relevant.		N/A
30.2.3.2	Parts of insulating material supporting current-carrying connections, and		P
	parts of insulating material within a distance of 3 mm,		P
	subjected to glow-wire test of IEC 60695-2-11		P
	Test not carried out on material having a glow-wire ignition temperature according to IEC 60695-2-13 as specified		N/A
	Where an non-metallic material is within 3 mm of a current carrying connection, but is shielded from the connection by a different material, then the interposed shielding material in place but not directly to the shielded material shall comply with IEC 60695-2-11 (IEC 60335-1/A2)		N/A
	Glow-wire test of IEC 60695-2-11, the temperature being:		P
	750°C, for connections carrying a current exceeding 0,2 A during normal operation		P
	650°C, for other connections		N/A
	Parts that during the test produce a flame persisting longer than 2 s, tested as specified		N/A
	If a flame persists longer than 2 s during the test, parts above the connection, as specified, subjected to the needle-flame test of annex E, unless		N/A
	the material is classified as V-0 or V-1 according to IEC 60695-11-10, no thicker than the relevant part of the appliance. (IEC 60335-1/A2)		N/A
30.2.4	Base material of printed circuit boards subjected to needle-flame test of annex E		N/A
	Test not applicable to conditions as specified (IEC 60335-1/A2)		N/A
30.101	Air heaters having an enclosure of substantially non-metallic material sufficiently resistant to fire (IEC 60335-2-105)		N/A
	Enclosure subjected to needle-flame test of annex E, unless		N/A
	the material is classified as V-0 or V-1 according to IEC 60695-11-10		N/A
31	**RESISTANCE TO RUSTING**		P
	Relevant ferrous parts adequately protected against rusting		P
32	**RADIATION, TOXICITY AND SIMILAR HAZARDS**		P

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
	Appliance does not emit harmful radiation		P
	Appliance does not present a toxic or similar hazard due to their operation in normal use. (IEC 60335-1/A2)		P
	Compliance is checked by the limits or tests specified in Part 2. (IEC 60335-1/A2)		N/A
	However, if no limits or tests are specified in Part 2, then the appliance is deemed to comply with the requirement without testing. (IEC 60335-1/A2)		N/A
A	**ANNEX A (INFORMATIVE)** **ROUTINE TESTS**		N/A
	Description of routine tests to be carried out by the manufacturer		N/A
AA	**ANNEX AA (INFORMATIVE)** **EXAMPLE OF A MULTIFUNCTIONAL SHOWER CABINET (IEC 60335-2-105)**		N/A
	Description of multifunctional shower cabinet		N/A
B	**ANNEX B (NORMATIVE)** **APPLIANCES POWERED BY RECHARGEABLE BATTERIES**		N/A
	The following modifications to this standard are applicable for appliances powered by batteries that are recharged in the appliance		N/A
	This annex does not apply to battery chargers		N/A
3.1.9	Appliance operated under the following conditions:		N/A
	-the appliance, supplied by its fully charged battery, operated as specified in relevant part 2		N/A
	-the battery is charged, the battery being initially discharged to such an extent that the appliance cannot operate		N/A
	-if possible, the appliance is supplied from the supply mains through its battery charger, the battery being initially discharged to such an extent that the appliance cannot operate. The appliance is operated as specified in relevant part 2		N/A
	If the appliance incorporates inductive coupling between two parts that are detachable from each other, the appliance is supplied from the supply mains with the detachable part removed		N/A
3.6.2	Part to be removed in order to discard the battery is not considered to be detachable		N/A

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
5.101	Appliances supplied from the supply mains tested as specified for motor-operated appliances		N/A
7.1	Battery compartment for batteries intended to be replaced by the user, marked with battery voltage and polarity of the terminals		N/A
7.12	The instructions for appliances incorporating batteries intended to be replaced by the user includes required information		N/A
	Details about how to remove batteries containing materials hazardous to the environment given		N/A
7.15	Markings placed on the part of the appliance connected to the supply mains		N/A
8.2	Appliances having batteries that according to the instruction may be replaced by the user need only have basic insulation between live parts and the inner surface of the battery compartment		N/A
	If the appliance can be operated without batteries, double or reinforced insulation required		N/A
11.7	The battery is charged for the period described		N/A
19.1	Appliances subjected to tests of 19.101, 19.102 and 19.103		N/A
19.101	Appliances supplied at rated voltage for 168 h, the battery being continually charged		N/A
19.102	Short-circuiting of the terminals of the battery, being fully charged, for appliances having batteries that can be removed without the aid of a tool		N/A
19.103	Appliances having batteries replaceable by the user supplied at rated voltage under normal operation with the battery removed or in any position allowed by the construction		N/A
21.101	Appliances having pins for insertion into socket-outlets have adequate mechanical strength, checked according to procedure 2 of IEC 68-2-32		N/A
	Part of the appliance incorporating the pins subjected to the free fall test, procedure 2, of IEC 60068-2-32, the number of falls being:		N/A
	- 100, the mass of part does not exceed 250 g		N/A
	- 50, the mass of part exceeds 250 g		N/A
	After the test, the requirements of 8.1, 15.1.1, 16.3 and clause 29 are met		N/A
22.3	Appliances having pins for insertion into socket-outlets tested as fully assembled as possible		N/A
25.13	An additional lining or bushing not required for interconnection cords operating at safety extra-low voltage		N/A

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
30.2	For parts of the appliance connected to the supply mains during the charging period, 30.2.3 applies		N/A
	For other parts, 30.2.2 applies		N/A
C	**ANNEX C (NORMATIVE)** **AGEING TEST ON MOTORS**		N/A
	Tests, as described, carried out when doubt with regard to the temperature classification of the insulation of a motor winding		N/A
D	**ANNEX D (NORMATIVE)** **THERMAL MOTOR PROTECTORS**		P
	Applicable to appliances having motors that incorporate thermal motor protectors		P
E	**ANNEX E (NORMATIVE)** **NEEDLE-FLAME TEST** **(IEC 60335-1/A2)**		P
	Needle-flame test carried out in accordance with IEC 60695-11-5, with the following modifications:		P
7	Severities		P
	The duration of application of the test flame is 30 s ± 1 s		P
9	Test procedure		P
9.1	The specimen so arranged that the flame can be applied to a vertical or horizontal edge as shown in the examples of figure 1		P
9.2	Application of needle-flame, modification: The first paragraph does not apply		P
	If possible, the flame is applied at least 10 mm from a corner		P
9.3	The test is carried out on one specimen		P
	If the specimen does not withstand the test, the test may be repeated on two additional specimens, both withstanding the test		P
11	Evaluation of test results		P
	The duration of burning not exceeding 30 s or:		N/A
	for printed circuit boards, the duration of burning not exceeding 15 s		P

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
F	**ANNEX F (NORMATIVE)** **CAPACITORS**		N/A
	Capacitors likely to be permanently subjected to the supply voltage, and used for radio interference suppression or voltage dividing, comply with the following clauses of IEC 60384-14, with the following modifications:		N/A
1.5	Terminology		N/A
1.5.3	Class X capacitors tested according to subclass X2		N/A
1.5.4	This subclause is applicable		N/A
1.6	Marking		N/A
	Items a) and b) are applicable		N/A
3.4	Approval testing		N/A
3.4.3.2	Table II is applicable as described		N/A
4.1	Visual examination and check of dimensions		N/A
	This subclause is applicable		N/A
4.2	Electrical tests		N/A
4.2.1	This subclause is applicable		N/A
4.2.5	This subclause is applicable		N/A
4.2.5.2	Only table IX is applicable		N/A
	Values for test A apply		N/A
	However, for capacitors in heating appliances the values for test B or C apply		N/A
4.12	Damp heat, steady state		N/A
	This subclause is applicable		N/A
	Only insulation resistance and voltage proof are checked		N/A
4.13	Impulse voltage		N/A
	This subclause is applicable		N/A
4.14	Endurance		N/A
	Subclauses 4.14.1, 4.14.3, 4.14.4 and 4.14.7 applicable		N/A
4.14.7	Only insulation resistance and voltage proof are checked		N/A
	Visual examination, no visible damage		N/A
4.17	Passive flammability test		N/A
	This subclause is applicable		N/A
4.18	Active flammability test		N/A
	This subclause is applicable		N/A

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
G	**ANNEX G (NORMATIVE)** **SAFETY ISOLATING TRANSFORMERS**		N/A
	The following modifications to this standard are applicable for safety isolating transformers:		N/A
7	Marking and instructions		N/A
7.1	Transformers for specific use marked with:		N/A
	-name, trademark or identification mark of the manufacturer or responsible vendor		N/A
	-model or type reference		N/A
17	Overload protection of transformers and associated circuits		N/A
	Fail-safe transformers comply with subclause 15.5 of IEC 61558-1		N/A
22	Construction		N/A
	Subclauses 19.1 and 19.1.2 of IEC 61558-2-6 are applicable		N/A
29	Clearances, creepage distances and solid insulation		N/A
29.1, 29.2 and 29.3	The distances specified in items 2a, 2c and 3 in table 13 of IEC 61558-1 apply		N/A
H	**ANNEX H (NORMATIVE)** **SWITCHES**		N/A
	Switches comply with the following clauses of IEC 61058-1, as modified:		N/A
	-The tests of IEC 61058-1 carried out under the conditions occurring in the appliance		N/A
	-Before being tested, switches are operated 20 times without load		N/A
8	Marking and documentation		N/A
	Switches are not required to be marked		N/A
	However, switches that can be tested separately from the appliance marked with the manufacturer's name or trade mark and the type reference		N/A
13	Mechanism		N/A
	The tests may be carried out on a separate sample		N/A
15	Insulation resistance and dielectric strength		N/A
15.1	Not applicable		N/A
15.2	Not applicable		N/A
15.3	Applicable for full disconnection and micro-disconnection		N/A
17	Endurance		N/A

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
	Compliance is checked on three separate appliances or switches		N/A
	For 17.2.4.4, the number of cycles is 10 000, unless otherwise specified in 24.1.3 of the relevant part 2 of IEC 60335		N/A
	Switches for operation under no load and which can be operated only by a tool and switches operated by hand that are interlocked so that they cannot be operated under load, are not subjected to the tests		N/A
	Subclauses 17.2 and 17.2.5.2 are not applicable (IEC 60335-1/A1)		N/A
	The ambient temperature during the test is that occurring in the appliance during the test of Clause 11 in IEC 60335-1 (IEC 60335-1:2001/A1)		N/A
	Temperature rise of the terminals not more than 30 K above the temperature rise measured in clause 11 of IEC 60335-1		N/A
20	Clearances, creepage distances, solid insulation and coatings of rigid printed board assemblies		N/A
	This clause is applicable to clearances and creepage distances for functional insulation, across full disconnection and micro-disconnection, as stated in table 24		N/A
I	**ANNEX I (NORMATIVE)** **MOTORS HAVING BASIC INSULATION THAT IS INADEQUATE FOR THE RATED VOLTAGE OF THE APPLIANCE**		N/A
	The following modifications to this standard are applicable for motors having basic insulation that is inadequate for the rated voltage of the appliance:		N/A
8	Protection against access to live parts		N/A
8.1	Metal parts of the motor are considered to be bare live parts		N/A
11	Heating		N/A
11.3	Temperature rise of the body of the motor is determined instead of the temperature rise of the windings		N/A
11.8	Temperature rise of the body of the motor, where in contact with insulating material, not exceeding values in table 3 for the relevant insulating material		N/A
16	Leakage current and electric strength		N/A
16.3	Insulation between live parts of the motor and its other metal parts not subjected to the test		N/A
19	Abnormal operation		N/A
19.1	The tests of 19.7 to 19.9 not carried out		N/A

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
19.101	Appliance operated at rated voltage with each of the following fault conditions:		N/A
	- short circuit of the terminals of the motor, including any capacitor incorporated in the motor circuit		N/A
	- short circuit of each diode of the rectifier		N/A
	- open circuit of the supply to the motor		N/A
	- open circuit of any parallel resistor, the motor being in operation		N/A
	Only one fault simulated at a time, the tests carried out consecutively		N/A
22	Construction		N/A
22.101	For class I appliances incorporating a motor supplied by a rectifier circuit, the d.c. circuit being insulated from accessible parts of the appliance by double or reinforced insulation		N/A
	Compliance checked by the tests specified for double and reinforced insulation		N/A
J	**ANNEX J (NORMATIVE)** **COATED PRINTED CIRCUIT BOARDS (IEC 60335-1/A2)**		N/A
	Testing of protective coatings of printed circuit boards carried out in accordance with IEC 60664-3 with the following modifications:		N/A
5.7	Conditioning of the test specimens		N/A
	When production samples are used, three samples of the printed circuit board are tested		N/A
5.7.1	Cold		N/A
	The test is carried out at -25°C		N/A
5.7.3	Rapid change of temperature		N/A
	Severity 1 is specified		N/A
5.9	Additional tests		N/A
	This subclause is not applicable		N/A
K	**ANNEX K (NORMATIVE)** **OVERVOLTAGE CATEGORIES**		P
	The information on overvoltage categories is extracted from IEC 60664-1		P
	Overvoltage category is a numeral defining a transient overvoltage condition		P
	Equipment of overvoltage category IV is for use at the origin of the installation		N/A

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
	Equipment of overvoltage category III is equipment in fixed installations and for cases where the reliability and the availability of the equipment is subject to special requirements		N/A
	Equipment of overvoltage category II is energy consuming equipment to be supplied from the fixed installation		P
	If such equipment is subjected to special requirements with regard to reliability and availability, overvoltage category III applies		N/A
	Equipment of overvoltage category I is equipment for connection to circuits in which measures are taken to limit transient overvoltages to an appropriate low level		N/A
L	**ANNEX L (INFORMATIVE)** **GUIDANCE FOR THE MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES**		P
	Sequences for the determination of clearances and creepage distances		P
M	**ANNEX M (NORMATIVE)** **POLLUTION DEGREE**		P
	The information on pollution degrees is extracted from IEC 60664-1		P
	Pollution		P
	The microenvironment determines the effect of pollution on the insulation, taking into account the microenvironment		P
	Means may be provided to reduce pollution at the insulation by effective enclosures or similar		P
	Minimum clearances specified where pollution may be present in the microenvironment		P
	Degrees of pollution in the microenvironment		P
	For evaluating creepage distances, the following degrees of pollution in the microenvironment are established:		P
	- pollution degree 1: no pollution or only dry, non-conductive pollution occurs. The pollution has no influence		N/A
	- pollution degree 2: only non-conductive pollution occurs, except that occasionally a temporary conductivity caused by condensation is to be expected		N/A

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
	- pollution degree 3: conductive pollution occurs or dry non-conductive pollution occurs that becomes conductive due to condensation that is to be expected		P
	- pollution degree 4: the pollution generates persistent conductivity caused by conductive dust or by rain or snow		N/A
N	**ANNEX N (NORMATIVE)** **PROOF TRACKING TEST**		N/A
	The proof tracking test is carried out in accordance with IEC 60112 with the following modifications:		N/A
7	Test apparatus		N/A
7.3	Test solutions		N/A
	Test solution A is used		N/A
10	Determination of proof tracking index (PTI)		N/A
10.1	Procedure		N/A
	Voltage is 100 V, 175 V, 400 V or 600 V .....:		N/A
	Last paragraph of clause 3 applies		N/A
	The test is carried out on five specimens		N/A
	In case of doubt, additional test with voltage reduced by 25 V, the number of drops increased to 100		N/A
10.2	Report		N/A
	The report stating if the PTI value was based on a test using 100 drops with a test voltage of (PTI-25) V		N/A
O	**ANNEX O (INFORMATIVE)** **SELECTION AND SEQUENCE OF THE TESTS OF CLAUSE 30** (IEC 60335-1/A2)		P
	Description of tests for determination of resistance to heat and fire		P
P	**ANNEX P (INFORMATIVE)** **GUIDANCE FOR THE APPLICATION OF THIS STANDARD TO APPLIANCES USED IN WARM DAMP EQUABLE CLIMATES**		N/A
5.7	Ambient temperature during tests of clause 11 and 13 is 40 +/- 3 °C (IEC 60335-1/A1)		N/A
7.1	The appliance shall be marked with the letters WDaE (IEC 60335-1/A1)		N/A
7.12	The instructions shall state that the appliance is to be supplied trough a residual current device (RCD) not exceeding 30 mA (IEC 60335-1/A1)		N/A

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
15.3	The value of t is 37 °C (IEC 60335-1/A1)		N/A
19.13	The leakage current test of clause 16.2 is applied (IEC 60335-1/A1)		N/A
Q	**ANNEX Q (INFORMATIVE)** **SEQUENCE OF TESTS FOR THE EVALUATION OF ELECTRONIC CIRCUITS** **(IEC 60335-1/A1)**		P
	Description of tests for appliances incorporating electronic circuits		P
R	**ANNEX R (INFORMATIVE) SOFTWARE EVALUATION ACCORDING TO IEC 60730-1**		N/A
H.2	Only definitions H.2.16 to H.2.20 are applicable (IEC 60335-1/A1)		N/A
H.11.12	All the subclauses of H.11.12 as modified are applicable (IEC 60335-1/A1)		N/A
H.11.12.7.1	For appliances using software class C having a single channel with self-test monitoring structure, the manufacturer shall provide measures (IEC 60335-1/A1)		N/A
H.11.12.8	Software fault/error detection shall occur before compliance with clause 19.13 is impaired (IEC 60335-1/A1)		N/A
H.11.12.13	Software and safety related hardware under its control shall initialize and terminate before compliance with clause 19.13 is impaired (IEC 60335-1, A1)		N/A

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
ZA	**ANNEX ZA (NORMATIVE)** **SPECIAL NATIONAL CONDITIONS (EN 60335-1)**		N/A
7.12	DENMARK: Supply cords of class I appliances, which are delivered without a plug, shall be provided with a visible tag with the following text: Vigtigt! Lederen med grøn/gul isolation må kun tilsluttes en klemme mærket Important! The conductor having green/yellow insulation shall only be connected to a terminal marked  (IEC 417, No. 5019 eller/or IEC 417, No. 5017)." If it is essential for the safety of the appliance, the tag shall be provided with a diagram showing the connection of the other conductors or with the following text: "For tilslutning af de øvrige ledere, se medfølgende installationsvejledning. For the connection of the other conductors, see the enclosed instructions for installation.		N/A
19.5	NORWAY: The test is also applicable to appliances intended to be permanently connected to fixed wiring.		N/A
22.2	FRANCE, NORWAY: The second paragraph of this subclause, that delas with single-phase, permanently conncted class I appliances having heating elements, is not applicable due to the supply system.		N/A
25.6	BELGIUM, FRANCE, SPAIN, UNITED KINGDOM: Plugs according to standaard sheet C 2b are not allowed.		N/A
	AUSTRIA, FINLAND, GERMANY, ICELAND, IRELAND, ITALY, LUXEMBOURG, NETHERLANDS, NORWAY, PORTUGAL, SPAIN, SWEDEN, SWITZERLAND, UNITED KINGDOM: Plugs according to standard sheet C 3b are not allowed.		N/A
	DENMARK: Replace the common modification by the follwing:		N/A

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
	Supply cords of single-phase portable appliances having a rated current not exceeding 13 A shall be provided with a plug according to the following: - Class I appliances Section 107-2-D1, ed.3, 1998 Standard Sheet DK 2-1 For appliances covered by a part 2 of EN 60335, it is also allowed until further notice, and unless otherwisw specified, to use plugs in accordance with Section 107-2-D1, ed. 3, 1998, Standard Sheet C 2b, C 3b or C4. - Class II appliances Section 107-2-D1, ed.3, 1998 Standard Sheet C 1b, C 5, C 6, DKA 2-1a and DKA 2-1b		N/A
	If stationary single-phase appliances having a rated current not exceeding 13 A are provided with a supply cord and a plug, the plug shall be in accordance with the requirements specifed above. If multi-phase appliances and single-phase appliances having a rated current exceeding 13 A are provided with a supply cord and a plug, the plug shall comply with the following table: Class / Plug: Section 107-2-D1 Standard sheet / EN 60309-2 Standard sheet I: DK 6-1a / 2-II, 2-IV II: DK 6-1a* / 2-II, 2-IV* * Earthing contact not connected. NOTE: These plugs are also allowed for appliances having a rated current equal to or less than 13 A.		N/A
	The maximum current for the plugs is as follows: C5 2,5 A DKA 2-1a and 1b 10 A DK 2-1a 13 A C 1b and C 6 16 A C 2b 16 A C 3b 16 A C 4 16 A		N/A
	IRELAND: Only plugs according to standard sheets B2 and C5 are allowed (see also Annex ZB)		N/A
	ITALY: Only plgs listed in CENELEC Report R0BT-005:2001 are allowed.		N/A
	SPAIN: For appliances or household use, only the following plugs are allowed: - according to UNE 20315:ESC 10-1b, C2b, C4, C6 or ESB 25-5b; - according to UNE-EN 50075.		N/A

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
	SWITZERLAND: Supply cords of portable household and similar electrical appliances having a rated current not exceeding 10 A shall be provided with a plug complying with SEV 1011 or IEC 60884-1 and one of the following dimensions sheets:		N/A
	SEV 6532-2.1991, Plug type 15 3P+N+PE 250/400 V, 10A		N/A
	SEV 6533-2.1991, Plug type 11 L+N 250 V, 10A		N/A
	SEV 6534-2.1991, Plug type 12 L+N+PE 250 V, 10A		N/A
	NOTE: 16 A plugs do not exist in the Swiss domestic system.		N/A
	UNITED KINGODOM: Only plugs according to standard sheets B2 and C5 are allowed (see also Annex ZB).		N/A
25.8	IRELAND, UNITED KINGDOM: In the table, replace the line for 10 A and 16 A by: > 10 and ≤ 13 1,25 > 13 and ≤ 16 1,5.		N/A
ZB	**ANNEX ZB (INFORMATIVE)** **A-DEVIATIONS (EN 60335-1)**		N/A
4	SWITZERLAND (Ordinance relating to Environmentally Hazardous Substances, SR 814.013 of 1986-06-09, Annex 4.1):		N/A
	Carbon-zinc batteries shall not be imported as commercial goods or supplied by a manufacturer unless they contain no more cadmium and mercury than is necessary in accordance with the state of the art, but not exceeding a total of 250 mg per kologram of battery.		N/A
	Alkali-manganese batteries shall not be imported as commercial goods or supplied by a manufacturer unless they contain no more mercury than is necessary in accordance with the state of the art, but not exceeding 10 g of zinc per kilogram.		N/A
7.1	ITALY (Statutory Instrument No. 105 of 1949): The voltage is 220 V/380 V.		N/A
25.6	IRELAND (Statutory Instrument No. 525 of 1997): These regulations apply to all plus for domestic use at a voltage of not less than 200 V and in general allow only plugs complying with I.S. 401:1997, or equvalent, to be fitted to domestic appliances.		N/A

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict
	UNITED KINGDOM (Statutory Instrument 1994 No 1768): These regulations apply to all plugs fordomestic use at a voltage of not less than 200 V and in general allow only plugs to BS 1363 to be fitted to domestic appliances. It also allows plugs to BS 4573 and standard sheet C5 to be fitted to shavers and toothbrushes.		N/A
ZC	**ANNE ZC (NORMATIVE) (EN 60335-1)**		N/A
	Normative references to inteernational publications with their corresponding European publications		N/A
ZD	**ANNEX ZD (INFORMATIVE) (EN 60335-1)**		N/A
	IEC and CENELEC code designations for flexible cords		N/A
ANNEX EMF			N/A
	The Tested product also complies to the requirements of EN 50366:2003		N/A
	Limit ……100%	Measured max. :……100%	N/A

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict

10.1	TABLE: Power input deviation				P
Input deviation of/at:	P rated (W)	P measured (W)	dP	Required dP	Remark
Model ZS-8002 220V	2591	2491	-3,8%	⩽+5% and ⩾-10%	P
Model ZS-8002 225V	2710	2600	-4,1%	⩽+5% and ⩾-10%	P
Model ZS-8002 230V	2832	1712	-4,2%	⩽+5% and ⩾-10%	P
--					

10.2	TABLE: Current deviation				N/A
Current deviation of/at:	I rated (A)	I measured (A)	dI	Required dI	Remark
--					

11.8	TABLE: Heating test, thermocouples:		P
	Test voltage (V) ..... :	243,8	—
	Ambient (°C)..... :	23,0	—

Thermocouple locations	dT (K)	Max. dT (K)
Internal wiring	15,3	50
Supply cords	14,2	50
Relay（T85）	19,2	60
Handle shower	10,9	30
Surface of capacitors	16,3	30
Surface of control box	7,2	Clause 30
PCB	25,1	Clause 30
Winding of transformer	30,1	80
floor of test corner	16,2	60
Surface of Handle	12,8	60
--		

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict

11.8	TABLE: Heating test, resistance method:					P
	Test voltage (V) ..... :		243,8			—
	Ambient, t_1 (°C) .....:		23,0			—
	Ambient, t_2 (°C) .....:		23,0			—
Temperature rise of winding		R_1 (Ω)	R_2 (Ω)	dT (K)	Max. dT (K)	Insulation class
Main winding of pump motor		12,84	14,69	37,1	95	130
Auxiliary winding of pump motor		7,65	8,83	39,7	95	130

13.2	TABLE: Leakage current :		P
	Heating appliances: 1,15 x rated input .....:	—	—
	Motor-operated and combined appliances: 1,06 x rated voltage .....:	243,8	—
Leakage current between		I (mA)	Max. allowed I (mA)
Any pole of supply and accessible parts contacted with metal foil		0,16	3,5
--			

13.3	TABLE: Electric strength :		P
Test voltage applied between:		Voltage (V)	Breakdown (Yes/No)
Live parts and earthed metal parts		1000	No
Live parts and the metal foil which stick to the surface of reinforced insulating material		3000	No
--			

14	TABLE: Transient overvoltages					N/A
Clearance between:		Cl (mm)	Required Cl (mm)	Rated impulse voltage (V)	Impulse test voltage (V)	Flashover (Yes/No)
--						

16.2	TABLE: Leakage current		P
	Single phase appliances: 1,06 x rated voltage .....:	243,8	—
	Three phase appliances 1,06 x rated voltage divided by √3: .....:	—	—
Leakage current between		I (mA)	Max. allowed I (mA)

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict

Live parts and accessible parts contacted with metal foil	0,18	3,5

16.3	TABLE: Electric strength		P
Test voltage applied between:		Voltage (V)	Breakdown (Yes/No)
Live parts and accessible metal parts		1250	No
Live parts and metal foil which stick to the surface of reinforced insulating material		3000	No
--			

17	TABLE: Overload protection, temperature rise		P
Temperature rise of part/at:		T (°C)	Max. T (°C)
Primary of transformer		125,8	215
--			
--			

19.7	TABLE: Abnormal operation, locked rotor/moving parts :					P
	Test voltage (V) ..... :		230			—
	Ambient, t_1 (°C) .....:		20,2			—
	Ambient, t_2 (°C) .....:		20,4			—
Temperature of winding	R_1 (Ω)	R_2 (Ω)	dT (K)	T (°C)	Max. T (°C)	
Main winding of pump motor	20,27	29,17	113,1	136,4	225	
--						

19.9	TABLE: Abnormal operation, running overload					N/A
	Test voltage (V) ..... :					—
	Ambient, t_1 (°C) .....:					—
	Ambient, t_2 (°C) .....:					—
Temperature of winding	R_1 (Ω)	R_2 (Ω)	dT (K)	T (°C)	Max. T (°C)	
--						

19.11.2	TABLE: Abnormal operation, fault conditions of electronic circuits		P
	Electronic circuit ..... :	Controller	—

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict

	Manufacturer .....:			See table of components	—
	Type.....:			SDP-1500	—
	At rated voltage (V) .....:			230	—
Component tested		Short circuit	Open circuit	Remark-measured	Verdict
Whirlpool baths heater (with Thermostat) authorized with EN 60335-1 and EN 60335-2-60		--	--	--	P
--					
--					

19.13	TABLE: Abnormal operation, temperature rises		P
Thermocouple locations		dT (K)	Max. dT (K)
Supply cord		22,3	150
External enclosure of control box		14,0	150
--			

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict

24.1	TABLE: Components				P
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity
Wind pump	Changzhou sanding electro motors & appliances co., ltd	DXD-6M	220-240V 50Hz 0,45kW/0,6HP	IEC 60335-1 IEC 60335-2-60	CE Tested with the appliance
Pumps	Changzhou sanding electro motors & appliances co., ltd	DXD-1	220-240V/50Hz 0,76kW Class130	IEC 60335-1 IEC 60335-2-60	CE Tested with the appliance
Motor thermo-protectors	Sensata technologies co., ltd.	8cm035	250V～8A 140℃	IEC 60335-1 IEC 60335-2-60	KEMA 2014531,02 Tested with the appliance
Whirlpool baths heater	Changzhou sanding electro motors & appliances co., ltd	SDP-1500	220-240V 50Hz 1,5kW	IEC 60335-1 IEC 60335-2-60	CE Tested with the appliance
Sheathed heating element	Hangzhou Kawai Electric Co., Ltd	SU	240V~ Max. 1,5kW	UL 1030	UL E206799
Thermal-Link	Hosho Electronics (H.K.)	D125	128℃ 16A 250V～	EN60691	VDE 40010943
Controller	Changzhou sanding electro motors & appliances co., ltd	DXD-A	220-230V 50Hz	IEC 60335-1 IEC 60335-2-60	CE Tested with the appliance
Supply cord	Foshan Shunde Chencun Yongneng Plastic Appliance Factory	H05VV-F	3X2,5mm^2	DIN 0281-5	VDE 40014082
Plug	Foshan Shunde Chencun Yongneng Plastic Appliance Factory	SP-03	16A 250V	GB2099.1 GB1002	CCC200201 0201007987
TV(only used on model ZS-1382)	Shengzhen konsta electronic co., ltd.	LD-1012S	DC12V 1,5A	IEC 60335-1 IEC 60335-2-60	CE Tested with the appliance
An asterisk indicates a mark which assures the agreed level of surveillance					

28.1	TABLE: Threaded part torque test		P
Threaded part identification	Diameter of thread (mm)	Column number (I, II, or III)	Applied torque (Nm)
Screws of external enclosure	4,0	II	1,2
Screws of controller box	4,0	II	1,2
Screws of earthing terminal	4,0	II	1,2
--			

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict

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

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	0,2	0,6	0,9	1,2	1,5	1,7	1,9	P	—	—	P
≤50	0,2	0,6	0,9	1,2	1,5	1,7	1,9	—	P		P
≤50	0,4	1,2	1,8	2,4	3,0	3,4	3,8	—	—	P	P
>50 and ≤ 125	0,3	0,8	1,1	1,5	1,9	2,1	2,4		—	—	N/A
>50 and ≤ 125	0,3	0,8	1,1	1,5	1,9	2,1	2,4	—		—	N/A
>50 and ≤ 125	0,6	1,6	2,2	3,0	3,8	4,2	4,8	—	—		N/A
>125 and ≤ 250	0,6	1,3	1,8	2,5	3,2	3,6	4,0	P	—	—	P
>125 and ≤ 250	0,6	1,3	1,8	2,5	3,2	3,6	4,0	—	P		P
>125 and ≤ 250	1,2	2,6	3,6	5,0	6,4	7,2	8,0	—	—	P	P
>250 and ≤ 400	1,0	2,0	2,8	4,0	5,0	5,6	6,3		—	—	N/A

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict

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
>250 and ≤ 400	1,0	2,0	2,8	4,0	5,0	5,6	6,3	—		—	N/A
>250 and ≤ 400	2,0	4,0	5,6	8,0	10,0	11,2	12,6	—	—		N/A
>400 and ≤ 500	1,3	2,5	3,6	5,0	6,3	7,1	8,0		—	—	N/A
>400 and ≤ 500	1,3	2,5	3,6	5,0	6,3	7,1	8,0	—		—	N/A
>400 and ≤ 500	2,6	5,0	7,2	10,0	12,6	14,2	16,0	—	—		N/A
>500 and ≤ 800	1,8	3,2	4,5	6,3	8,0	9,0	10,0		—	—	N/A
>500 and ≤ 800	1,8	3,2	4,5	6,3	8,0	9,0	10,0	—		—	N/A
>500 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

IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict

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
>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
>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
*), B=Basic, S=Supplementary and R=Reinforced											

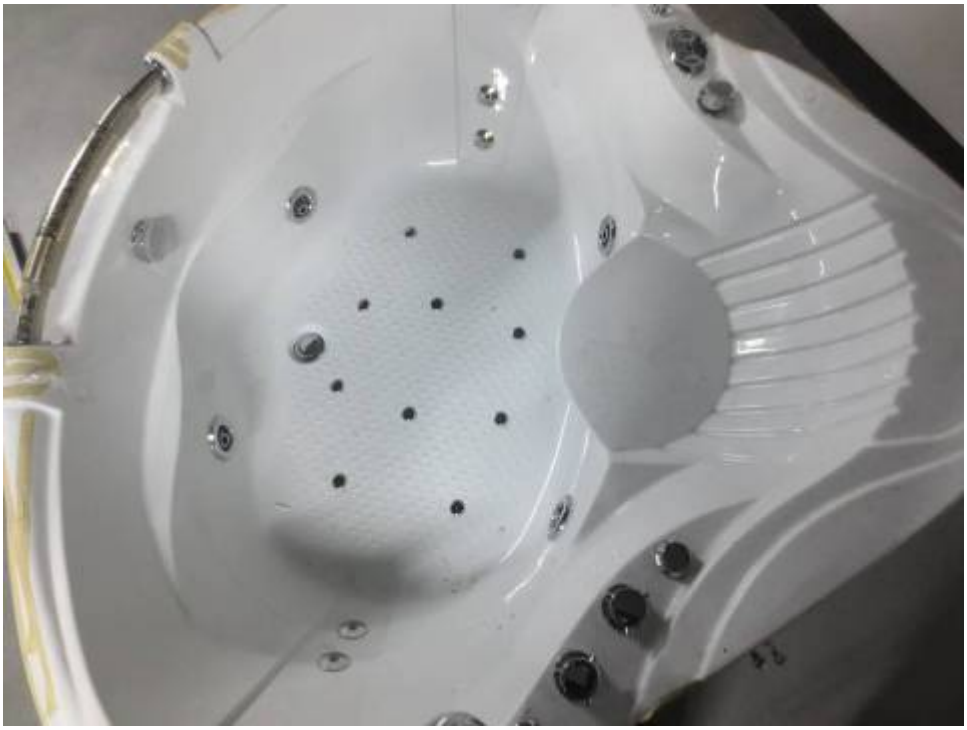
IEC 60335-2-60 and/or EN 60335-2-60			
Clause	Requirement + Test	Result - Remark	Verdict

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
≤50	0,2	0,6	0,8	1,1	1,4	1,6	1,8	P
>50 and ≤ 125	0,3	0,7	1,0	1,4	1,8	2,0	2,2	N/A
>125 and ≤ 250	0,4	1,0	1,4	2,0	2,5	2,8	3,2	P
>250 and ≤ 400	0,8	1,6	2,2	3,2	4,0	4,5	5,0	N/A
>400 and ≤ 500	1,0	2,0	2,8	4,0	5,0	5,6	6,3	N/A
>500 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
>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

TABLE 30 RENSISTANCE TO HEAT, FIRE AND TRACKING (appended table)														**P**
Component	Manufacturer	Type	Ball pressure test				Tracking test [CTI/ PTI] 175V	Glow wire test					Needle-flame test	Verdict
			75°C	cl. 11 +40°C	125°C	cl. 19 +25°C		GWT 550°C	GWT 650°C	GWT 750°C	GWFI 850°C	GWIT		
Enclosure of control box	Shengjia Electronics Co., Ltd	ABS	P 0,8mm	N/A	N/A	N/A	N/A	P	N/A	N/A	N/A	N/A	N/A	Tested with the appliance
Enclosure	Changzhou Sanding Electro-Motors & Appliances Co., Ltd	ABS	P 0,7mm	N/A	N/A	N/A	N/A	P	N/A	N/A	N/A	N/A	N/A	Tested with the appliance
PCB	Guangzhou Taihe	--	N/A	N/A	P 1,1mm	N/A	P	N/A	N/A	N/A	N/A	N/A	P	Tested with the appliance
Water pipe of steam shower	Guangzhou Taihe	PVC	N/A	N/A	N/A	N/A	N/A	P	N/A	N/A	N/A	N/A	P	Tested with the appliance
Cord anchorage in Steam Generator, electric box	Changzhou sanding electro motors & appliances co., ltd	PP	P 0,9mm	N/A	N/A	N/A	N/A	P	N/A	N/A	N/A	N/A	P	Tested with the appliance

Photos:

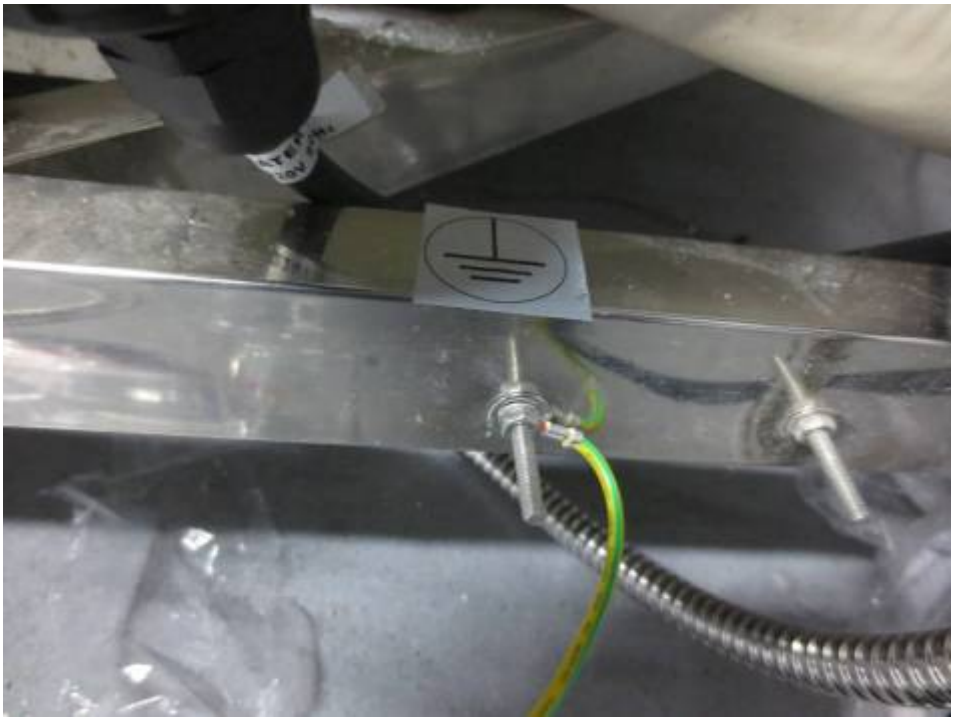
Model: ZS-8002



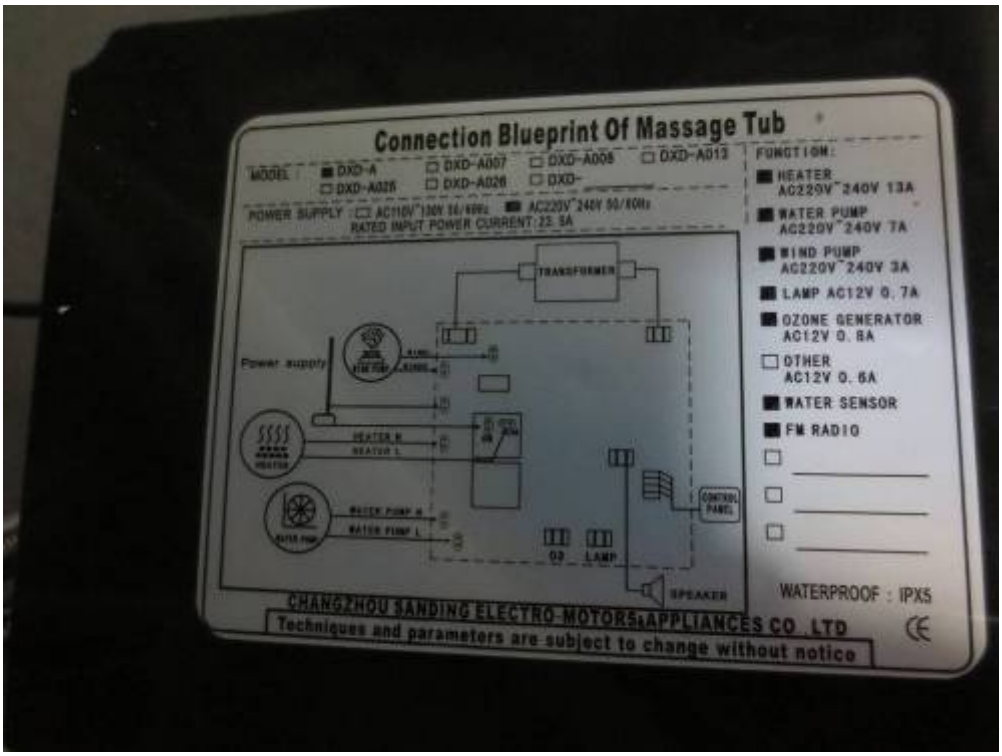
Photos:

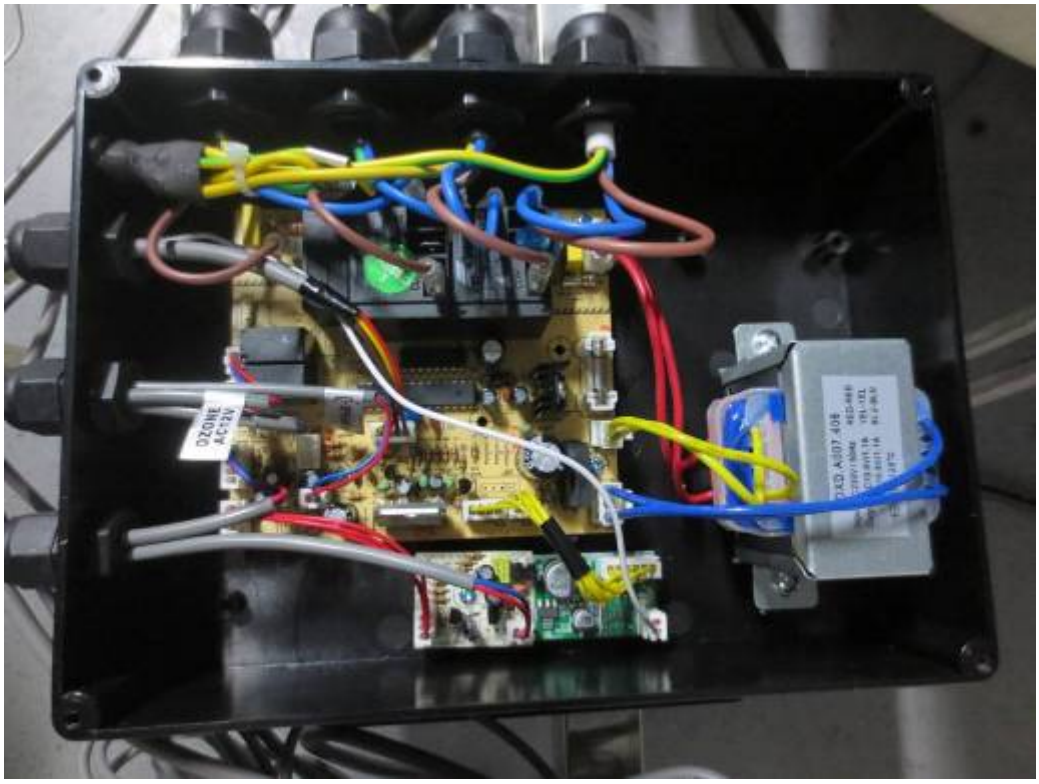

DXD
DO NOT START
MOTOR WITHOUT
WATER IN PUMP
MODEL
HP
SPEC.No
DXD - 1
DC

Photos:

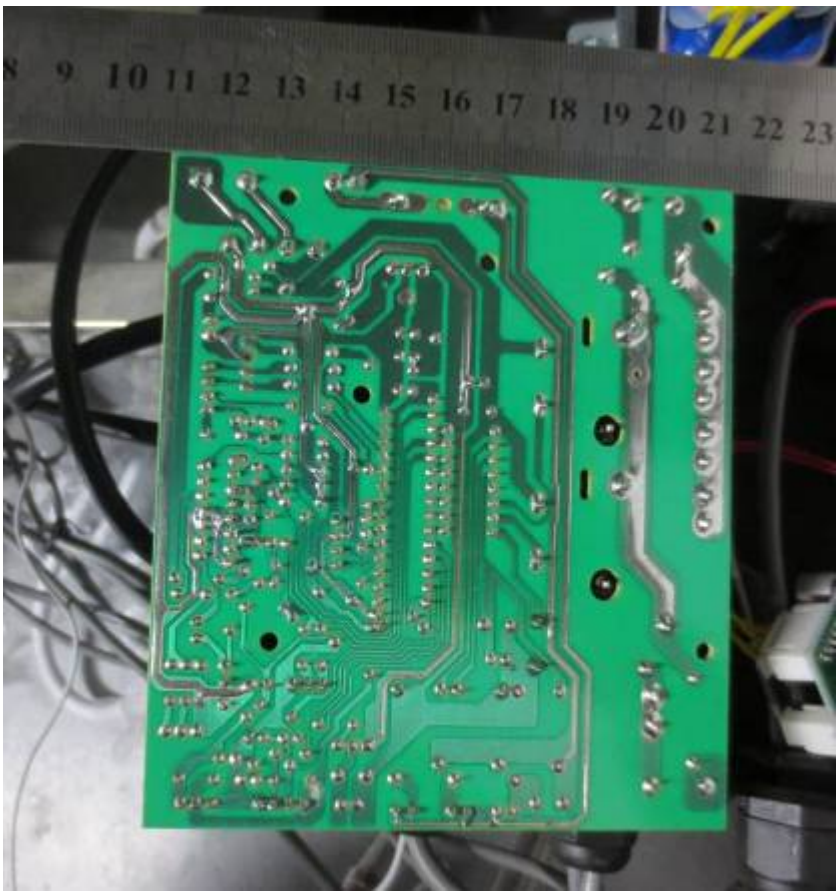


Photos:


Connection Blueprint Of Massage Tub
MODEL
DXD-A
DXD-A007
DXD-A008
DXD-A013
DXD-A026
DXD-A028
DXD-
POWER SUPPLY
RATED INPUT POWER CURRENT:22.5A
FUNCTION:
HEATER AC220V~240V 13A
WATER PUMP AC220V~240V 7A
WIND PUMP AC220V~240V 3A
LAMP AC12V 0.7A
OZONE GENERATOR AC12V 0.8A
OTHER AC12V 0.6A
WATER SENSOR
FM RADIO
TRANSFORMER
Power supply
HEATER
CONTROL PANEL
O3
LAMP
SPEAKER
WATERPROOF : IPX5
CHANGZHOU SANDING ELECTRO-MOTORS&APPLIANCES CO.,LTD
Techniques and parameters are subject to change without notice


OZONE AC12V

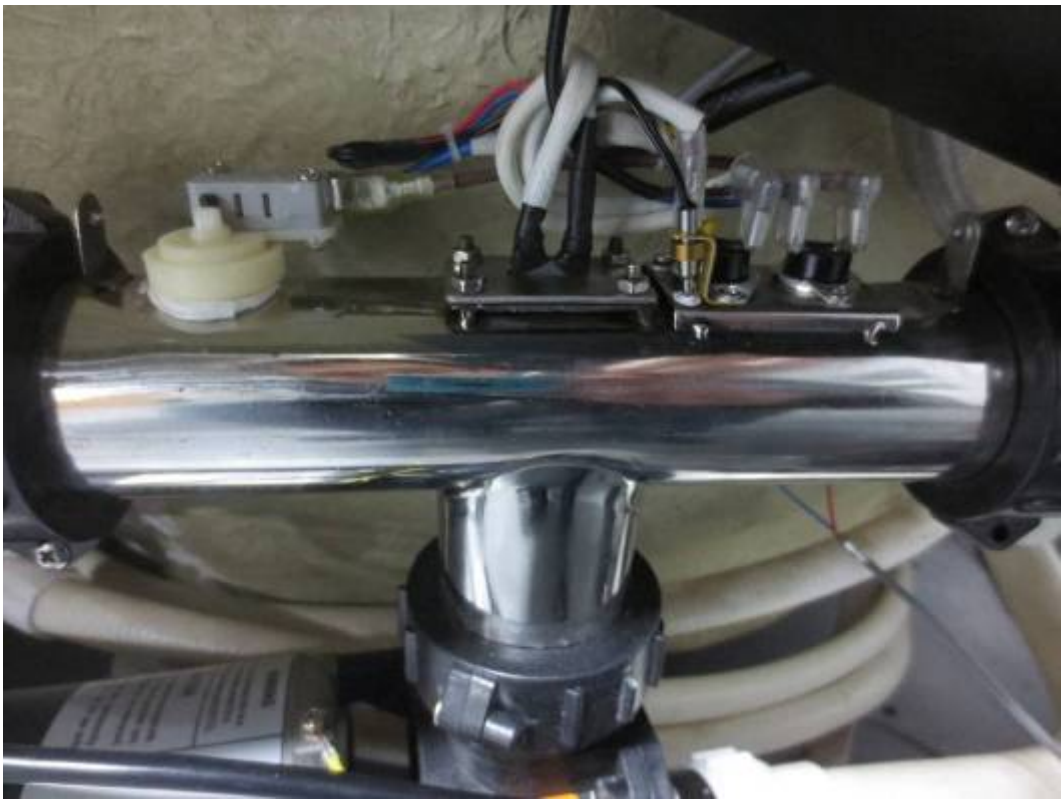
Photos:



Photos:


DXD
HEATER
CE
MODEL
SDP-1500
VOLTAGE
220-240VAC
50/60Hz
POWER
1.5KW
HP
2

Photos:



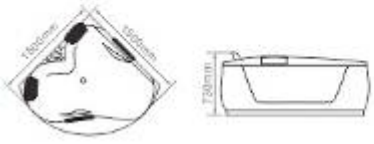
Photos:


DXD WIND PUMP
MODEL DXD-6 M CAT
VOLTS 220-240 Hz 50/60
121109927

Photos:

MODEL:ZS-8018
Size:1500×1500×650

ZS-8026
SIZE:1500x1500x730mm



Photos:

MODEL:ZS-8006

SIZE:1350×1350×650mm

Photos:

ZS-8032
SIZE:1500x1500x700mm

ZS-8208
Size:1350x1350x650mm

Photos:

MODEL:ZS-8305
SIZE:800×1700×650mm

MODEL:ZS-8003
SIZE:1300×1800×650mm

Photos:

ZS-8027
SIZE:1250x1700x700mm

MODEL:ZS-8008
SIZE:850×1700×650mm

Photos:

Photos:

ZS-1382
Size:2000x2500x950mm

注意事项
Important

1. 报告无检验单位公章无效；

The test report is invalid without the official stamp of CVC;

2. 未经本试验室书面同意，不得部分地复制本报告；

Any photocopies or part photocopies of the test report are forbidden without the written permission from CVC;

3. 报告无主检,审核,批准人签名无效；

The test report is invalid without the signatures of Author and Reviewer;

4. 报告涂改无效；

The test report is invalid if altered;

5. 对检验报告若有异议，请于收到报告之日起十五天内向检验单位提出；

Objections to the test report must be submitted to CVC within 15 days;

6. 一般情况，委托检验结果仅对所检验样品有效；

Generally, commission test is responsible for the tested samples only;

7. 检验结果中“N/A”表示“不适用”，“P”表示“通过”，“F”表示“不通过”.

As for the test result, “N/A” means “not applicable”, “P” means “pass” and “F” means “fail”.

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